

## **Report on the public health administration of the Punjab.**

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# REPORT

ON THE

## Public Health Administration of the Punjab

DURING THE YEAR 1933

BY

KHAN BAHADUR DR. K. A. RAHMAN, O.B.E.,  
M.B., CH.B., (EDIN.), D.P.H., (LOND.),

*Director of Public Health, Punjab,*

TOGETHER WITH

## The Report on Sanitary Works

BY

D. A. HOWELL, Esquire, M.I.C.E.,  
*Superintending Engineer, Public Health Circle, Punjab,*

AND

A SUMMARY OF

*The Proceedings of the Sanitary Board, Punjab,  
During the financial year 1933-34.*

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1934.

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REPORT

Public Health Administration of the Empire

During the Year 1901

The Report on Sanitary Works



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Superintending Engineer to xxiv pages.

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READ—

The report on the Public Health Administration of the Punjab for the year 1933.

AN abnormal feature during the year 1933 was the severe flooding of three districts in the Ambala Division, as a result of exceptionally heavy rains towards the end of the monsoon, with the result that mortality from fever was the highest of the decade.

Mainly for the above reason there was an increase in the provincial death rate from 24.7 to 28.2, the total number of deaths (660,542) being higher than in any year since 1926, when besides high mortality for fever, there was also a serious plague epidemic. But, as the birth rate (1,042,624) showed a rapid leap upwards, being the highest yet recorded, the population increased from 24,189,503 to 24,571,585. A feature of the birth rate is, as usual, the excess of males over females, the proportion during the year under report having been 111.6 to 100 as against 111.9 in the preceding year. It is regrettable that the infant mortality rate, 192.55 per thousand, exceeded that of any year since 1926.

The special thanks of Government were conveyed to the Public Health Department and other officials in connection with the eminently satisfactory arrangements for the Sun Eclipse Fair held at Kurukshetra (Thanesar) in the Karnal District in August 1933. The number of pilgrims exceeded five lakhs, many of whom came from cholera-infected areas. Fortunately, however, owing to careful dispositions for conservancy and water supply arrangements, there were only three imported cases of cholera of which one was fatal.

*Cholera.*—Twenty districts were infected during the year, but mortality was unduly low, there being only 160 deaths and 288 seizures as compared with 614 deaths and 1,119 seizures in the year preceding. The success attending *anti-cholera* measures at the Solar Eclipse Fair has been mentioned above. It is thus apparent that the Public Health authorities' *anti-cholera* measures have now attained a very high degree of success.

*Small-pox.*—The mortality from this cause showed a considerable increase, the number rising from 5,184 to 11,626, every district in the province being affected. It is explained in the report that this periodic rise every five years or so is inevitable, but that it is reassuring that the peak of the curve of the disease attained a considerable lower level than at the last similar epidemic in 1926 when 17,595 deaths were recorded. The strenuous efforts to combat the disease are described in detail in the report, and the Government is glad to learn of the co-operation of other departments, especially the Education, with the Public Health Department. The great majority of deaths from this cause were of small children, 3,534 being those of under one year of age and 5,332 of children between one and ten years. It is noticeable that the number of vaccination operations fell from 3.6 millions to 3.2 millions. These figures are for the years ending March the 31st, 1933, and March the 31st, 1934. It is explained in the report that in the previous period smallpox mortality was higher, and that this accounts for the larger number of vaccinations.

It will be observed (*vide* paragraph 36 of the report) that a decrease in the number of vaccination operations considerably increases the cost of each operation. Thus the decline in the number of successful operations performed by the staff of the local bodies raised the cost from Re. 0-2-0 to Re. 0-2-5 and in the case of the special vaccination staff of the Public Health Department from Re. 0-7-1 to Re. 0-10-4.

*Plague.*—The plague mortality showed a further welcome decrease falling from 2,003 to 1,789. This is gratifying, as fear was expressed in last year's review that the slight increase recorded for 1932 might portend a further rise. More than half of the mortality occurred in the Hoshiarpur district, which was one of the three districts mostly affected in the



previous year. There was a considerable increase in the number of plague inoculations, which amounted to 133,743 as against 91,600, the greatest number of inoculations being in the district chiefly affected, Hoshiarpur.

*Malaria.*—As above remarked the climatic conditions of the province were particularly conducive to malaria, and mortality from fevers, which consisted mainly of this disease, was abnormally high (460,731). The strenuous efforts made to combat it, particularly by distribution of quinine and cinchona from tubes maintained in rural areas, are described in the report. In connection with the relief work in operation for a considerable period in Rohtak, Karnal and Gurgaon, an attempt was made to give a four days' quinine treatment course to patients, and appears to have been successful. In this connection, it may be remarked that an endeavour was made by Government subsequently to the year under report to ensure cheap supply of guaranteed quinine, by the agency of a commercial firm, in rural areas, as it is understood that people who can afford to pay for quinine often find considerable difficulty in obtaining a satisfactory article. Owing, however to the abnormal freedom from malaria which, fortunately, prevailed in 1934, it is not possible to estimate the success of the experiment.

*Leprosy.*—An instructive leprosy survey was carried out by Dr. S. S. Jaikaria during the year throughout the Kangra district, which is probably the only endemic area in the province and also in part of the Lahore district including the Lahore city. It was subsequently decided that Dr. Malhotra, the Medical Officer of the Leper Home, Palampur, should also be entrusted with the work of the District Leprosy Officer of the Kangra district. Seven out door clinics have been opened in the tahsil Dera Gopipur of that district where free treatment is administered, and it is confidently expected that the treatment of the disease in its early stages will ultimately lead to its eradication. In the Lahore district 22 cases were discovered, 19 in Lahore city itself; and of the latter, seven were residents of the United Provinces and 8 were beggars who have migrated from the United Provinces. Against these no action can at present be taken as the Lepers Act has not yet been extended to this province.

*Ankylostomiasis.*—The special investigation into the prevalence of hookworm infection in the Shakargarh tahsil of the Gurdaspur district produced important results, and it was found that in some villages over 50 per cent. of inhabitants were suffering from the complaint. A scheme for mass treatment was sanctioned, and is being carried out under the supervision of the Epidemiologist. Probably this insidious disease is prevalent unnoticed in other areas, and it is intended to extend the investigation to other districts.

*Maternity and Child Welfare.*—It is gratifying that the number of health centres showed a considerable increase during 1933, the total number in the province rising to 52. Of these, 20 are maintained by the Red Cross Society, 13 by District Boards, 10 by voluntary associations other than the Red Cross Society and 9 by Municipal Committees; and 35 of them are in rural areas. Most of them during the year were inspected by the Inspectress of Health Centres, who is also the Principal of the Punjab Health School, and the work at each centre proceeds on the same lines as at the Punjab Health School centre. During the year the centres were visited by 11,264 expectant mothers for advice, medical aid being called for in 343 cases. It is also a matter for satisfaction that the number of *dais* under training rose from 1,405 to 1,779, and during the year 575 of these obtained the Indigenous *Dais'* certificate of the Punjab Central Midwives Board, and of 14,222 confinement cases attended by trained *dais* over 5,000 were supervised by Lady Health Visitors. Government, therefore, is satisfied that at least a good beginning has been made in the sphere of maternity and child welfare work.

*Urban Sanitation.*—As in the previous year, financial stringency prevented Government giving grants for new schemes, and expenditure by local bodies on conservancy and drainage was also restricted.



Rupees 1,75,000 were allotted to the Sanitary Board in connection with urban sanitary works, and this went towards works already in progress, but only Rs. 1,35,000 was actually expended.

A list of a large number of very important schemes continued or completed during the year is given in Appendix I of the report, supplied by the Superintending Engineer, Public Health Circle. This part of the report also contains a detailed account of the inspection of water supply and conservancy works of local bodies throughout the Province, carried out by the Public Health staff; and in this connection the Government regrets that it has again been found by the department that some local bodies fail to maintain sanitary works in a satisfactory state. It is particularly unfortunate that this continues to be the case, in view of the enormous increase of sanitary works in towns during the last 13 years, since the Sanitary Engineer to Government (now Superintending Engineer, Public Health Circle), whose duties were previously advisory and consultative, undertook the actual construction of important sanitary schemes. Thus, the total value of Public Health Engineering works, wholly or partly completed by the end of 1933, was about 350 lakhs, or three times the value of such work in 1920. It may also interest the public to know that the total horse-power of mechanical plant installed for sanitary works is about 8,000, or over twelve times as great as that of the plants existing in 1920.

*Rural Sanitation.*—As in the case of urban sanitary schemes, there were no new rural water supply schemes started, though work continued on all schemes already in progress. Under the ægis of the Public Health Department about Rs. 56,000 were spent by District Boards and villagers on the cleansing of wells and on the construction of parapets. An interesting account is given in the report of propaganda work and 'uplift' meetings held throughout the province. The work done in Ambala, Ludhiana and Ferozepore districts in particular was very considerable and, from the figures supplied in the report, it would appear that the condition of a large number of villages in those districts must have been vastly improved.

*Conclusion.*—The Government deeply regrets to have to record the death, after he had been in charge of the department for ten months, of Major R. C. Malhotra, I.M.S. He had for many years been Assistant Director of Public Health, in which capacity he did valuable work, and it was hoped that he would be in charge of the department for several years to come. He was succeeded as Director of Public Health by K. B. Dr. K. A. Rahman, who had several times previously officiated with success in that capacity. The Government agrees with the Director that the work of the Public Health staff, by no means a large one, considering its duties, grappled successfully and enthusiastically with an increasing amount of work.

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ORDER.—Ordered that copies of this review be circulated with the report and be furnished with the usual number of copies of the report to the Government of India, also that the review be published in the *Punjab Government Gazette*.

Ordered further that a copy be furnished to the Director of Public Health, Punjab, for information.

By order of the Punjab Government,  
(Ministry of Education).

FIROZ KHAN NOON,  
Minister for Education.

P. MARSDEN,  
Secretary to Government, Punjab,  
Transferred Departments.





## CHAPTER I—Climatic and Economic Conditions.

1. The year under report experienced very abnormal weather during the last two months of the monsoon period with unusually heavy downpour in the South-West Punjab in the month of August and in the East and North of the Province in September. While heavy rains in the Punjab-Kumaon Hills caused huge floods in the Jumna river affecting the areas adjacent to its banks, specially in three districts of the Province, unprecedented concentrated precipitation in the same districts from the 17th to 20th September was responsible for extensive flooding of the vast countryside beyond.

*January and February (the cold weather period).*—Six western disturbances entered the Punjab during January, of which the fourth brought extensive rain and snow in the hills. Four spells of cold weather were also experienced, and the rainfall was generally in large defect. In February thunder-showers were experienced all over the Province, particularly in the hills in connection with the fifth western disturbance. The total rainfall, however, was in slight defect in the East and North Punjab and in large defect in the South-West Punjab. Skies were normally clouded and humidity was in defect. Both the maximum and minimum temperatures were below normal everywhere in January and above it in February. The rainfall was in defect except in Hissar and Ambala during February.

*March to May (the hot weather period).*—Four out of the eight western disturbances which entered India during March, gave fairly widespread thunder-showers in the hills and in the plains of the East and North Punjab. South-West Punjab also received a few slight showers on several days. The total rainfall of the month was consequently in excess in the East and North Punjab, but continued to be in large defect in the South-West Punjab.

In April the rainfall was more scattered, being in slight to moderate defect. During May the hills and the adjoining plains received extensive rain almost daily in the first fortnight. Subsequently, the weather remained dry, and only a few light showers were reported from the hills in the fourth week. The month's total rainfall was in large excess except in the Central Punjab and the unusual activity of the thunder-storms resulted in a mild summer conditions in the Province.

Skies remained abnormally clouded in April and May. Humidity was normal throughout the period. Both maximum and minimum temperatures were below normal in April, while the maximum temperature alone was below it in the following month.

*June to September (the monsoon period).*—Thunderstorms prevailed during the first fortnight of June. The monsoon extended into the eastern districts towards the end of the third week. By the fourth week it had penetrated into the northern districts and rain was almost a daily occurrence in the East and North Punjab. Total rainfall of the month was in moderate excess in the East and North Punjab and in slight excess in the South-West Punjab.

The monsoon continued feeble during the first fortnight of July. During the third week, however, it became more active, and also extended into the South-West Punjab. It caused heavy local rain in the East and North Punjab where the total rainfall was in slight excess. In the South-West Punjab, however, the total rainfall was in moderate defect.

The activity of the monsoon in August was stimulated by a depression from the Bay of Bengal which passed through Rajputana at the end of the first week. The monsoon weakened for a few days, but revived along the hills on the 11th and continued strong till the middle of the month, after which it remained feeble till the 19th and strengthened again by the end of the third week. The total rainfall was in large excess all over the Province. The monsoon became unusually active in September as a result of two depressions which advanced from the Bay. The first broke up against the Simla Hills on the 19th and the second filled up over the South-West Punjab on the 27th. Heavy rain which fell in the South-West Punjab and the Punjab-Kumaon Hills was responsible for huge flood.



in the Jumna which caused much damage to property and cattle in Rohtak and the adjoining districts of Karnal and Gurgaon.

The percentage departure of rainfall in the two sub-divisions during the monsoon period was as follows :—

		June.	July.	August.	September.	Monsoon period from June to September.
East and North Punjab .. ..	.. ..	+41	+11	+77	+144	+63
South-West Punjab .. ..	.. ..	+19	—26	+164	+36	+59

The clouds and humidity were in excess and the maximum temperature below normal in August and September.

*October to December (the retreating monsoon period).—*The hills and the adjoining plains received a certain amount of rainfall between the 11th and 14th October from a western disturbance. As a result of an inflow of moist winds from the Bay, a few falls were also experienced in the East and North Punjab and the hills between the 18th and 21st. In the South-West Punjab, however, no rainfall was recorded.

In the month of November, the East and North Punjab received general rain on the 26th, but the total rainfall of the month was in defect all over the Province.

Seven western disturbances entered the Punjab during December, the first of which gave local rain in the South-West Punjab on the 3rd. The third gave scattered showers in and near the Punjab Hills on the 11th. A few light showers were also experienced in the Punjab Hills on the 23rd in connection with the sixth disturbance. The total rainfall during the month was in large defect almost everywhere.

Clouds were in defect in October. Humidity was normal throughout. Both maximum and minimum temperatures were above normal in December.

The meteorological conditions detailed above show that during the first four months of the year rainfall was in defect associated with low relative humidity while during the monsoon period there was heavy precipitation in the months of August and September.

These factors had a direct bearing on the health of the Province, since the former brought about conditions inimical to the prevalence of plague while excessive downpour in the month of September in certain parts of the country mitigated the intensity of epidemic malaria in a few districts which would otherwise have been badly involved.

2. The average wholesale price of the staple food grains of the Province expressed in terms of rupees per maund, prevailing in the four principal markets during the year 1933 and the two previous years is shown in table I :—

Economic conditions.

TABLE I.

Locality.	WHEAT.			BARLEY.			JOWAR.		
	1933.	1932.	1931.	1933.	1932.	1931.	1933.	1932.	1931.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Ambala..	2 11 3	2 12 1	2 0 1	1 13 2	2 3 5	1 11 2	..	..	..
Lahore ..	3 0 9	2 11 9	2 0 5	2 0 0	1 11 9	1 8 4	2 2 6	2 4 7	2 3 11
Rawal- pindi.	3 2 8	2 15 9	2 4 3	2 1 3	1 14 1	1 10 9	2 4 6	2 3 6	2 5 3
Multan ..	2 13 1	2 8 11	1 12 3	1 15 11	1 12 3	1 4 10	2 1 10	1 15 4	1 7 6



TABLE I—concluded.

Locality.	BAJRA.			MAIZE.			GRAM.		
	1933.	1932.	1931.	1933.	1932.	1931.	1933.	1932.	1931.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Ambala..	..	..	..	2 1 3	1 13 2	1 8 6	2 0 2	2 3 1	2 5 11
Lahore ..	2 13 1	2 1 0	1 15 1	2 13 8	2 6 6	1 14 4	2 4 8	2 0 3	2 4 8
Rawal- pindi.	2 11 8	2 4 11	1 14 4	2 12 10	2 5 10	1 10 3	2 5 9	2 3 6	2 7 4
Multan ..	2 12 1	2 0 10	1 12 8	2 13 8	2 2 8	1 13 0	2 5 9	2 0 10	2 2 9

From a scrutiny of the figures it will be seen that the prices of all food-grains were higher in the year under report than in the preceding year except in Ambala in the case of wheat, barley and gram. The rise in prices may be attributable to low yields and to general market conditions of the Province.

Fodder and water were generally adequate. The wages demanded both by the skilled and unskilled labour were much lower than those returned in 1927 when a regular survey was held last.

### CHAPTER II.—Vital Statistics.

3. **Population.**—The estimated population on 31st December 1933, which has been arrived at by adding the births and subtracting the deaths since the enumeration of the last census on 1931, amounted to 24,571,585. The birth and death rates given in this report, are, however, calculated on the 1931 census population of the British districts (excluding Europeans and Anglo-Indians and the Military population of Cantonments). The natural increase in the population during the year under review was 382,082 as against 390,854 in the previous year and an average of 388,657 since the last census. All the districts in the province shared this increase, which was most conspicuous in Lyallpur (26,657) and least evident in Simla (403). The fact that the natural increase of the population in the year under report is 8,772 less than in the preceding year, is attributable to localised epidemics of malaria in the autumn of the year 1933 in certain districts.

The estimated population on 31st December 1933, comprised 13,388,329 males and 11,183,256 females. The number of males thus exceeded the females by 2,205,073 as compared with 2,174,001 at the end of the preceding year. The steady increase in the male population and decrease in the female population emphasises the need of intensive measures calculated to safeguard the health and welfare of women.

4. **Births.**—The total number of births registered during the year under report was highest on record and even exceeded the unprecedented figure of 1931. It was 1,042,624 or 44·4 *per mille* of which 549,975 (23·4 *per mille*) were males and 492,649 (21·0 *per mille*) were females. The corresponding figures for the previous year being 970,236 (41·4 *per mille*) which comprised 512,408 (21·8 *per mille*) males and 457,828 (19·5 *per mille*) females. The birth rate calculated on the estimated population was 42·4 *per mille* or 2·0 *per mille* less than the rate based on the census figure.

The male birth rate as usual exceeded the female birth rate, the excess during the year under review being 2·4 *per mille* as compared with 2·3 *per mille* in the preceding year and 2·3 *per mille* in the previous quinquennium (*vide*—table II) :—

TABLE II.

YEAR.	MALES.		FEMALES.		Excess of male over female births.	Rate of excess.	RATIOS CALCULATED ON ESTIMATED POPULATION.		Excess of male over female death-rate.
	Births.	Birth-rate.	Births.	Birth-rate.			Males.	Females.	
1933 ..	549,975	23·4	492,649	21·0	57,326	+2·4	22·4	20·1	2·3
1932 ..	512,408	21·8	457,828	19·5	54,580	+2·3	21·2	18·9	2·3
1928—32..	..	21·3	..	19·0	..	+2·3	..	..	..



The number of males born to every 100 females was 111·6, the corresponding figure being 111·9 in the year 1932 as well as in the preceding five years.

5. **The District Birth-rate.**—The district birth rate varied between a maximum of 56·0 *per mille* and a minimum of 34·4 *per mille*. The five districts exhibiting the highest birth rate were Gurgaon (56·0), Rohtak (51·8), Gurdaspur (51·2), Sialkot (49·9) and Amritsar (48·8) whilst the five districts recording the lowest birth rate were Attock (34·4), Muzaffargarh (36·7), Kangra (36·9), Simla (37·0) and Multan (38·0).

The birth rate in all the districts exceeded the death rate, the excess being greatest in Lyallpur (+23·1), Rohtak (+22·0), Jullundur (+21·7), Amritsar (+21·3) and Gurgaon and Gurdaspur (+20·8), each.

6. **The Urban and Rural Birth-rates.**—The birth rate of the 57 towns with a population of 10,000 and more was 40·4 *per mille* as compared with 37·3 *per mille* in the preceding year, while the birth rate of all towns, 175 in number, was 40·0 *per mille*. The birth rate of the three largest cities in the year under review, in the previous year and in the past quinquennium was as under :—

	Lahore.	Amritsar.	Multan.
1933 .. .. .	33·14	37·46	43·79
1932 .. .. .	30·66	35·19	43·59
1928—32 .. .. .	36·42	45·40	45·33

The birth rate in rural areas (excluding the 175 towns) was 45·1 *per mille* as compared with 42·0 *per mille* during the preceding year and a mean of 43·9 during the preceding quinquennium. The rural birth rate in the Province is as a rule higher than the urban birth rate. It will be seen that during the year under report the rural birth-rate exceeded the Provincial birth-rate and the urban birth-rate by 0·7 and 5·1, respectively. This relative increase is in part attributable to the fact that 59 towns (with a population of less than 5,000 each) have been excluded only this year from the urban figures as these 'towns' do not come under the present classification of towns as recently revised by the Public Health Commissioner with the Government of India.

7. **Still Births.**—The number of still births registered in the districts of the Punjab during the year under report was 12,297 (7,082 males and 5,215 females) showing a proportion of 11·79 *per mille* to total births. The districts recording the highest number of still births were Multan (1,329), Lahore (1,215), Lyallpur (916), Shahpur (773) and Muzaffargarh (755).

8. **Deaths.**—The total number of deaths registered during the year was 660,542 as compared with 579,382 recorded during the preceding year. The mortality during the year under report was 81,160 in excess. The provincial death rate was 28·2 *per mille* as against 24·7 in 1932 and a mean death rate of 24·7 in the preceding five years. The death rate calculated on the basis of estimated population was 26·9 *per mille* or 1·3 *per mille* less than the figures based on census enumeration.

The number of deaths recorded under the eight main heads of mortality during the last few years is given in table III :—

TABLE III.

Head of mortality.	1933.	1932.	1931.	1930.	1929.	1928.	1927.	1926.	1925.
Cholera ..	160	614	391	1,181	2,309	2,034	11,286	87	3,049
Smallpox ..	11,626	5,184	3,646	5,341	7,763	8,764	9,920	17,595	7,038
Plague ..	1,789	2,003	1,150	554	2,053	8,282	8,452	108,287	37,630
Fever ..	460,731	388,427	416,974	422,377	402,429	316,235	358,679	436,156	401,775
Dysentery and Diarrhoea.	12,345	13,287	14,284	12,247	13,208	10,503	11,136	11,181	9,475
Respiratory Diseases.	55,337	60,251	55,317	51,678	51,877	52,639	56,915	57,426	54,270
Injuries ..	7,013	6,633	6,110	6,103	6,636	7,306	6,776	6,514	6,449
Other causes..	111,541	102,983	111,344	109,101	103,688	101,471	100,185	112,146	95,166
<b>Total ..</b>	<b>660,542</b>	<b>579,382</b>	<b>609,216</b>	<b>608,582</b>	<b>589,963</b>	<b>507,234</b>	<b>563,349</b>	<b>749,392</b>	<b>614,852</b>



The figures given in table III show as follows :—

- (1) A remarkable decrease under the heads Cholera, Plague, Dysentery and Diarrhoea and Respiratory Diseases.
- (2) The mortality under the head Smallpox, although lower than in the year 1926, was greater than in the years 1927 to 1932, owing to the fact that the crest of the periodic wave of smallpox epidemic which started in 1932, attained its maximum height during the current year.
- (3) Favourable conditions were prevalent during the year for the spread of malaria in a large number of districts of the Province as a result of which the mortality under the head " Fevers " recorded an increase of 72,304 deaths over the figures of the preceding year.
- (4) The increase in general mortality of the year under the head " Other causes " was but a necessary sequel to the exceptionally small number of deaths last year under this category.

Out of the Provincial death-rate of 28·2 *per mille*, fevers were responsible for 19·6, other causes 4·8, respiratory diseases 2·4, smallpox and dysentery and diarrhoea 0·5 each, injuries 0·3, plague 0·1 and cholera 0·01.

The male and female deaths and death-rates during the year as compared with those of the preceding year and the mean for the last five years are given in table IV :—

TABLE IV.

YEARS.	MALE.		FEMALE.		Excess of female over male death-rate.	RATIOS CALCULATED ON ESTIMATED POPULATION.		Excess of female over male death-rate.
	Deaths.	Death-rate.	Deaths.	Death-rate.		Male.	Female.	
1933 ..	343,398	26·8	317,144	29·7	2·9	25·7	28·4	2·7
1932 ..	308,259	24·1	271,123	25·4	1·3	23·4	24·6	1·2
1928—32 ..	..	24·0	..	25·5	1·5	..	..	..

A study of the figures given in table IV indicates that the female death rate, as usual, exceeded the male death rate by 2·9 *per mille* when calculated on the census population and by 2·7 on the estimated population as compared with 1·3 and 1·2 *per mille*, respectively, in the year 1932 and a mean of 1·5 *per mille* in the preceding quinquennium.

**9. The District Death rate.**—The district death rates varied between a maximum of 43·2 *per mille* and a minimum of 22·9 *per mille*. The five districts exhibiting the highest death rates were Gujranwala 43·2, Gurgaon 35·2, Sheikhupura 32·6, Karnal 31·9 and Mianwali 31·3, whilst the five districts registering the lowest death rates were Lahore 22·9, Montgomery 23·4, Kangra 24·0, Lyallpur 24·9 and Jhang and Dera Ghazi Khan 25·0 each.

**10. The Urban Death rate.**—The number of deaths registered in 175 towns was 68,450 as compared with 69,642 in the previous year, showing a decrease of 1,192 deaths, but the death rate in 1933 (23·52) actually exceeded that of 1932 (22·18) by 1·34, which is partly attributable to the fact that during the year under report 59 towns (each having a population of less than 5,000) have been excluded from the urban area as these towns do not come under the category of towns as recently revised by the Public Health Commissioner with the Government of India.



The death rates of the three largest cities during the year 1932, 1933 and the mean of the years 1928—32 is given in table V—

TABLE V.

City.	DEATH-RATE.			Excess or defect of death-rate over the year 1932.
	1932.	1933.	1928—32.	
Lahore City .. ..	25.15	21.79	21.60	-3.36
Amritsar City .. ..	24.40	26.06	24.10	+1.66
Multan City .. ..	24.47	28.27	28.03	+3.80

Some of the smaller towns recorded exceptionally high death-rates, viz., Dharmasala Cantonment (107.36), Bukloh Cantonment (49.90), Dajal (43.49), Palwal (43.21), Shujabad (43.06), Gujrat civil lines (43.00), Bahadurgarh (42.37), Shahpur (42.23), Karor (41.82), Bhiwani (40.04), Jutogh Cantonment (39.63), Gujrat (38.51), Miani (37.39), Kot Mithan (36.94), Murree (36.60), Narowal (36.36). Deaths from fevers were mainly responsible for these high figures, though other causes also helped to swell up the death rate.

In the 13 towns under the charge of whole time Medical Officers of Health the total number of deaths recorded from different causes was 21,029 as detailed below :—

Annual Form No. VI-B.	Fevers .. ..	10,731
	Dysentery and Diarrhoea .. ..	2,174
	Respiratory Diseases .. ..	8,124

11. **The Rural Death rate.**—The number of deaths recorded in the rural circles during the year 1933 was 592,092 or 82,352 more than the number registered in the preceding year. The death rate in the year under review was 28.81 as compared with 25.09 in the year 1932 and a mean death rate of 25.18 *per mille* during the preceding quinquennium. The rural death rate was above the quinquennial mean figure in all the districts with the exception of 5, namely, Kangra, Lahore, Montgomery, Jhang and Dera Ghazi Khan. The five districts showing the highest death-rate were Gujranwala (47.25), Gurgaon (35.64), Sheikhupura (33.45), Karnal (32.54) and Mianwali (32.17), the cause being fevers in every case.

12. During the year under report the rural death rate exceeded the urban death-rate by 5.29 *per mille* of the population, which is mainly indicative of greater vulnerability of the rural areas to the ravages caused by malaria.

The death rates under the main heads of mortality in urban and rural areas in the year 1933 and in the previous year are given below :—

TABLE VI.

Head of mortality.	URBAN DEATH-RATE.			RURAL DEATH-RATE.			Excess or defect of urban death rate in 1933.
	1933.	1932.	Increase or decrease in 1933.	1933.	1932.	Increase or decrease in 1933.	
Cholera .. ..	0.02	0.07	-0.05	0.01	0.02	-0.01	+0.01
Small-pox .. ..	0.37	0.61	-0.04	0.49	0.16	+0.33	+0.08
Plague .. ..	0.04	0.04	Nil	0.08	0.09	-0.01	-0.04
Fevers .. ..	10.58	9.87	+0.71	20.92	17.59	+3.33	-10.34
Dysentery and Diarrhoea ..	1.29	1.17	+0.12	0.42	0.47	-0.05	+0.87
Respiratory Diseases ..	4.57	4.48	+0.09	2.05	2.27	-0.22	+2.52
Injuries .. ..	0.28	0.25	+0.03	0.30	0.29	+0.01	-0.02
All other causes ..	6.18	5.69	+0.49	4.55	4.19	+0.36	+1.63
Total .. ..	23.62	22.18	+1.34	28.81	25.09	+3.72	-5.29



The striking features brought out by a study of table VI are—

- (a) Marked excess in 'fever' death-rate in rural areas indicative of the fact that malaria is mainly the scourge of rural population.
- (b) Excess of deaths from Respiratory diseases in urban areas attributable to congestion and housing conditions in the cities.
- (c) Higher death-rates from Dysentery and Diarrhoea, Cholera and Small-pox in urban areas indicative both of defective conservancy and over-crowding in the towns. These factors play a vital part in the spread of these diseases in the Province.

**13. Seasonal Incidence of Mortality.**—April and August with a death-rate of 1.71 each were the healthiest months during the year 1933. Next in order come March (1.80), July (1.86), February (1.92) and May (2.06). The worst months were December (3.11), October (3.41) and November (3.94), pointing to the determining effect of the intensity of malaria on the mortality returns of the year.

**14. Age Incidence of Mortality.**—The total mortality among infants not exceeding one month in age was 85,631 (46,307 males and 39,324 females) as compared with 79,629 (42,823 males and 36,801 females) in the preceding year. The mortality in this age group was, therefore, 6,002 (3,479 males and 2,523 females) in excess of the figures of the previous year. The districts of Amritsar (5,655), Ferozepore (5,259), Jullundur (4,677), Karnal (4,652) and Gurdaspur (4,642), exhibited the largest number of deaths of infants during the first month of life.

Among Muhammadans the total number of deaths was 46,675 of which 25,091 were males and 21,584 females, among Hindus 36,684, 19,953 males and 16,731 females, among Indian Christians 1,547, 802 males and 745 females and among other classes 725, 461 males and 264 females.

(b) In the case of children over one month and not exceeding six months in age the mortality amounted to 57,749 (31,009 males and 26,740 females) as compared with 47,301 (25,979 males and 21,322 females) in the preceding year. The increase in the year under review was, therefore, 10,448 (5,030 males and 5,418 females). The districts recording the largest number of deaths in this age group were Gujranwala (2,975), Lahore (2,940), Sialkot (2,935), Multan (2,863) and Lyallpur (2,755).

Among the different classes, the figures were :—

	Males.	Females.	Total.
Muhammadans .. .. .	18,539	15,593	34,132
Hindus .. .. .	11,665	10,463	22,128
Indian Christians .. .. .	593	476	1,069
Other classes .. .. .	212	208	420

(c) *Children over six months and not exceeding twelve months.*—The total number of deaths in this age group in the year 1933 was 57,375 (30,002 males and 27,373 females) as compared with 46,274 (24,863 males and 21,411 females) in the preceding year. The increase in the year under review was, therefore, 11,101 (5,139 males and 5,962 females).

Among the different classes, the figures were :—

	Males.	Females.	Total.
Muhammadans .. .. .	17,234	15,836	33,120
Hindus .. .. .	11,757	10,856	22,613
Indian Christians .. .. .	663	499	1,162
Other classes .. .. .	298	182	480



(d) *Total deaths in infants not exceeding one year of age.*—The total deaths in this age group numbered 200,755, of which 107,318 were males and 93,437 females as compared with 173,204 (93,670 males and 79,534 females) in the preceding year. The increase in the year 1933 was, therefore, 27,551 (13,648 males and 13,903 females).

(e) *The infantile mortality rate.*—In the subjoined table VII are shown the deaths and death rates amongst infants calculated on the basis of total births during each year of the last decade :—

TABLE VII.

YEAR.	BIRTHS.			DEATHS OF INFANTS.			INFANTILE MORTALITY RATE.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1923 ..	468,186	417,401	885,587	92,903	81,223	174,126	198.43	194.59	196.62
1924 ..	435,765	385,920	821,685	93,143	81,519	174,662	213.75	211.23	212.57
1925 ..	434,042	388,034	822,076	82,177	72,135	154,312	189.33	185.90	187.71
1926 ..	451,428	403,122	854,550	93,128	80,716	173,844	206.30	200.23	203.43
1927 ..	457,668	409,688	867,356	78,387	66,898	145,285	171.27	163.29	167.50
1928 ..	500,397	449,533	949,930	85,842	73,384	159,226	171.55	163.25	167.62
1929 ..	481,885	430,033	911,918	91,456	78,343	169,799	189.79	182.18	186.20
1930 ..	469,771	417,750	887,521	88,851	75,988	164,839	189.14	181.90	185.73
1931 ..	528,336	473,915	1,002,251	96,507	82,157	178,664	182.66	173.35	178.26
1932 ..	512,408	457,828	970,236	93,670	79,534	173,204	182.80	173.72	178.52
Decennial average (1923—1932.)	473,989	423,322	897,311	89,606	77,190	166,796	189.05	182.34	185.88
1933 ..	549,975	492,649	1,042,624	107,318	93,437	200,755	195.13	189.66	192.55

A scrutiny of the table reveals the fact that infantile mortality during the year under report recorded an appreciable increase. It was 14.03 *per mille* in excess of the last year and 6.67 *per mille* higher than the average of the past decade.

In fact during the last 10 years it has only been exceeded three times.

This high infantile death-rate was but a necessary sequel to the exceptionally large number of births registered during the year. This excess was partly aggravated by the intensity of malaria to which infants are specially susceptible and partly also by smallpox.

The distribution of mortality amongst the different religions was as follows :—

Muhammadans .. ..	113,927 or 196.74 <i>per mille</i> .
Hindus .. ..	81,425 or 186.06 <i>per mille</i> .
Indian Christians .. ..	3,778 or 201.27 <i>per mille</i> .
Other classes .. ..	1,625 or 227.37 <i>per mille</i> .

The districts recording the largest number of deaths in this age group were Amritsar 11,115 or 204.18 *per mille*, Lyallpur 10,235 or 185.07 *per mille*, Ferozepore 10,045 or 187.28 *per mille*, Multan 9,901 or 222.65 *per mille* and Gurdaspur 9,784 or 197.29 *per mille*.

Amritsar, Ferozepore and Jullundur (which incidentally escaped being included in the list given above) have a continuously bad record in registering high mortality amongst infants.

Gujranwala, Lahore, Lyallpur, Multan and Sialkot recorded the largest number of deaths amongst infants exceeding one month but not exceeding 6 months of age.

(f) *Infantile mortality in Urban and Rural areas.*—During the year under review the infantile death-rate *per mille* of births registered was 195.03 (196.00



male and 190.46 female) in the case of urban areas and 192.40 (194.95 male and 189.56 female) in the case of rural areas as compared with 202.58 (207.03 male and 199.43 female) and 174.05 (179.71 male and 170.19 female), respectively in the preceding year.

(g) *The death rate at all age periods.*—The death rate of males and females at all age periods expressed as the death rate *per mille* of population of each age group as enumerated in February 1931 is given in table VIII together with excess or defect of the female over the male death rate at the corresponding age group :—

TABLE VIII.

Age periods.	DEATH RATE PER THOUSAND CENSUS POPULATION.			Excess or defect of female mortality.	DEATH RATE PER THOUSAND ESTIMATED POPULATION.		
	Male.	Female.	Total.		Male.	Female.	Total.
Under one year ..	195.13	189.66	192.55	—5.47	195.13	189.66	192.55
1—5 years ..	42.89	43.18	43.03	+0.29	40.95	41.22	41.09
5—10 years ..	11.53	12.64	12.04	+1.11	11.01	12.07	11.50
10—15 years ..	8.91	10.57	9.66	+1.66	8.51	10.10	9.22
15—20 years ..	11.03	13.76	12.26	+2.73	10.53	13.48	11.84
20—30 years ..	8.42	11.16	9.67	+2.74	8.04	12.26	9.82
30—40 years ..	11.44	14.96	12.98	+3.52	10.92	14.28	12.39
40—50 years ..	18.03	20.78	19.24	+2.75	17.22	19.84	18.37
50—60 years ..	29.66	34.73	31.85	+5.07	28.32	33.16	30.40
60 years and upwards ..	66.54	77.47	71.19	+10.93	63.53	73.97	67.97

While the infantile mortality (or ratio per thousand births) in the females is lower than that of males, the death-rate of females at subsequent age periods up to 60 years or upwards is invariably higher.

15. **The Death rate by religions and classes.**—The main features so far as they are available in respect of the incidence of mortality amongst the chief religions and classes are given in table IX :—

TABLE IX.

Age periods.	MUHAMMADANS.		HINDUS.		CHRISTIANS.		OTHER CLASSES.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Under one year ..	241.51	212.88	248.41	225.72	237.62	201.08	119.13	84.64
1 year and under 5 years.	45.73	46.70	39.85	38.92	40.61	40.06	15.32	19.51
5—10 years ..	12.69	13.92	10.14	11.07	10.56	12.42	5.17	5.13
10—15 years ..	9.52	10.92	7.98	10.20	12.60	13.55	6.90	5.06
15—20 years ..	11.58	14.06	10.46	13.76	10.66	10.88	7.42	7.24
20—30 years ..	8.57	11.20	8.24	11.36	10.53	11.65	5.74	4.53
30—40 years ..	11.59	15.21	11.33	14.86	14.09	15.46	6.09	8.00
40—50 years ..	18.17	20.31	18.03	21.71	19.95	20.52	11.38	13.52
50—60 years ..	29.53	32.52	30.46	37.92	27.84	37.97	14.38	24.73
60 years and upwards.	67.21	75.19	66.78	81.63	71.20	96.19	36.80	38.99
Total ..	27.51	30.10	25.97	29.61	27.71	30.37	14.00	15.18



From a scrutiny of the figures given in table IX it will be seen that the death rate of males and females amongst Muhammadans was slightly higher than the Hindu death rate, the excess being 1·54 in males and 0·49 in females. It will also be observed that the female death-rate amongst all classes is higher than the male death-rate, in the case of Muhammadans and Hindus the difference being 2·59 and 3·64 *per mille*, respectively, as compared with 0·81 and 2·47 in the preceding year.

**16. Railway Employees.**—In the year 1933, 37 births (22 males and 15 females) and 27 deaths (21 males and 6 females) were reported from railway stations not included within municipal limits as compared with 73 births (35 males and 38 females) and 59 deaths (45 males and 14 females), respectively, in the previous year. These deaths were classified as follows :—

Fevers 12, all other causes 10, Small-pox 2, Dysentery and Diarrhoea 2, and Injuries 1.

**17. Europeans and Anglo-Indians.**—During the year under report there were 170 births and 37 deaths among Europeans and Anglo-Indians against 348 births and 103 deaths during the previous year. The deaths were classified as follows :—

Fevers 6, Respiratory diseases 18, Injuries 2, and all other causes 11.

**18. Cantonments.**—Amongst the 155,286 persons forming the non-military population of cantonments, 4,635 births and 2,464 deaths were registered, representing an increase of 15 in the number of births and a decrease of 240 in the number of deaths as compared with the previous year. The birth-rate was 30 *per mille* and the death-rate 16 *per mille* as compared with 30 and 17 *per mille*, respectively in the preceding year. Of 2,464 deaths 11 were due to smallpox, 1,110 were registered under the head 'fevers,' dysentery and diarrhoea accounted for 96, respiratory diseases for 611, injuries for 25 and 611 deaths were registered under the heading 'all other causes.'

**19. Summary of the State of Public Health in 1933.**—The year was remarkable for registering the highest number of births ever recorded in the Province. The birth-rate was highest of all the provinces of India in 1933.

The infantile mortality of the year was consequently greater and swelled up the general mortality figures which was rather high. But the excess of births over deaths was only reduced by 8,772 as compared with last year, the record of which was one of the healthiest in the past.

Incidence of cholera was singularly low, and its control at the last Solar Eclipse Fair at Thanesar conspicuously unparalleled.

Mortality from plague was not only less than that of the year preceding but in itself was very low.

There was a distinct fall in deaths caused by Respiratory Diseases and Dysentery and Diarrhoea.

After a lapse of about 5 years the periodic rise in the incidence of smallpox was almost inevitable because of the characteristic epidemiology of the disease.

The peak of the curve, however, remained at a much lower level than during the last similar epidemic in 1926 when 17,595 deaths were recorded as compared with 11,626 deaths during the year under report, inspite of the increase in population and rapid progress made in the modes of communication in the rural areas of the Province.

Peculiar monsoon conditions were responsible for the aggravation of mortality under the head "Fevers" which recorded an excess of 72,304 deaths as compared with the preceding year and were mainly responsible for such insalubrity as prevailed during the year.

But for these two inflictions the bill of health would have been exceptionally good.

The difference between the birth rate and death rate of the year under review was 16·28 *per mille* as compared with 16·66 in the year preceding and 16·75 in 1931—both eminently healthy years.



Table X compares the registered birth and death-rates of the various provinces in India during the year 1933 :—

TABLE X.

Name of Province.	Birth-rate.	Death-rate.	Difference.
1. Central Provinces .. ..	44.25	26.55	17.70
2. Assam .. ..	31.04	20.31	10.73
3. Madras .. ..	37.72	23.66	14.06
4. United Provinces .. ..	39.22	18.69	20.53
5. Bihar and Orissa .. ..	35.7	22.1	13.6
6. North-West Frontier Province ..	30.05	21.28	8.77
7. Burma .. ..	29.83	18.71	11.12
8. Bengal .. ..	29.53	24.00	5.53
9. Bombay .. ..	36.39	24.79	11.60
10. Punjab .. ..	44.44	28.16	16.28

### CHAPTER III.—Chief Diseases.

20. **Cholera.**—During the year under report mortality from cholera was one of the lowest on record and that in spite of the fact that infection was present in the Province in 10 out of 12 months in the year and in 20 out of 29 districts in the Punjab.

There were 288 seizures with 160 deaths as compared with 1,119 cases and 614 deaths during last year.

The cholera death-rate was 0.01 *per mille* against 0.03 *per mille* in 1932 and a mean cholera death-rate of 0.06 during the preceding quinquennium. The cholera death-rate calculated on the basis of estimated population was 0.01 *per mille*.

The monthly mortality of the disease was as follows :—

January .. ..	Nil.
February .. ..	Nil.
March .. ..	4
April .. ..	4
May .. ..	10
June .. ..	27
July .. ..	26
August .. ..	13
September .. ..	20
October .. ..	37
November .. ..	16
December .. ..	3

It is thus evident that infection was present from early summer till late in the autumn a time of the year which is most favourable for its spread.

The Punjab is not the home of cholera and in most cases infection was traceable to importation from places situated so far apart as Dehra Dun and Darjeeling.

During April isolated imported cases from Dehra Dun and Darjeeling districts were reported from 3 districts. In May sporadic cases—a few indigenous others due to importation—occurred in Hissar, Ambala, Lahore, Gujranwala, Montgomery and Multan districts. In June no less than 10 districts were involved.

The disease, however, was never allowed to assume epidemic proportions and its control was prompt, vigorous and effective.

Out of the 20 districts involved, the more highly affected in order of severity were Amritsar 40, Lahore 27, Sheikhupura 16, Kangra 12 and Rohtak 11. The districts of Gurgaon, Simla, Jullundur, Ludhiana, Ferozepore, Gujrat, Mianwali, Muzaffargarh and Dera Ghazi Khan remained free throughout the year.

Out of a total of 175 towns only 11 were involved returning 45 deaths. The towns affected were Hissar (1), Gohana (3), Taanesar (1), Kalka (1), Lahore



(12), Kasur (1), Amritsar (16), Majitha (1), Qadian (7), Gujranwala (1) and Shahdara (1). It will be apparent from the above that in 8 out of 11 towns on the very first manifestation of infection the disease was immediately suppressed. The control of infection in large towns like Lahore and Amritsar, inspite of their defective conservancy system, was remarkable.

In rural areas cholera was reported from 70 villages which returned 115 deaths, i.e., an average of 1.64 deaths per village. Here too the suppression of cholera was equally quick and successful due to commendable activity displayed by the District Officers.

Special mention must be made here of the Solar Eclipse Fair held at Thanesar during the cholera season. No less than 14 localities in the Punjab alone had reported occurrence of infection within 3 weeks of the date of the fair. The United Provinces, the Central Provinces, and Bihar and Orissa from which a large number of pilgrims is drawn were also infected. An analysis of 94,053 Railway tickets collected at Kurukshetra Railway Station showed that at least 10,958 of pilgrims came from areas then known to be infected with cholera.

The danger of cholera in a vast congregation of people amounting to about 5 lacs was thus very real.

That the fair passed off with only 3 imported cases and 1 death and without a single indigenous case of cholera either in the Fair or amongst the returning crowds of pilgrims is eloquent of the unequalled measure of success of the unprecedented efforts put in by the Department in this connection. The actual measures adopted are, however, the subject of a special report on the Fair submitted to the Government.

**21. Smallpox.**—The number of deaths reported from smallpox rose from 5,184 in 1932 to 11,626 in 1933, showing an increase of 6,442 deaths. The mortality rate according to census population was 0.50 *per mille* as compared with 0.22 in the preceding year and a mean death-rate of 0.26 *per mille* in the preceding quinquennium. The death-rate calculated on the estimated population was 0.47 in the year under review.

By the end of 1932 smallpox infection had already attained epidemic proportions, recording a very heavy mortality in the month of December. It reached its climax in January of the year under report when the number of deaths registered rose to 1,806. There was a slight fall in the month of February with 1,648 deaths but in March the figure again went up to 1,733. April recorded 1,625 deaths and May 1,757, after which the epidemic began to decline perceptibly, the number of deaths being 1,438 in June, 866 in July, 329 in August, 142 in September and 66 in October.

With the onset of winter, the figures, however, rose up again to 72 in November and 144 in December. But as compared with December of last year with 1,703 deaths, mortality in December 1933 was markedly low showing that the epidemic wave had exhausted itself and that the periodic exacerbation of infection was over.

All the districts in the Province were infected. The five districts (rural areas) showing the highest death-rate were Shahpur (1.50), Sheikhpura (1.49), Gujranwala (1.00), Lahore (0.98) and Jhelum (0.97). The districts of Ludhiana, Karnal and Muzaffargarh were the least infected and showed a death-rate of 0.02, 0.03 and 0.03, respectively.

Of the deaths registered from smallpox 3,534 were under one year of age and 5,332 in the group 1—10 years and 2,760 in persons over 10 years of age the corresponding figures for the previous year being 1,881, 2,303 and 1,000, respectively. As regards sex the female death-rate (0.53) *per mille* as usual exceeded the male death-rate (0.47) *per mille* by 0.06 *per mille*.

The death-rate from smallpox in urban areas was 0.57 as compared with 0.49 in rural circles. Of 175 towns 76 escaped the disease and in the remaining 1,646 deaths were registered as against 1,908 in the previous year.

The death-rate from smallpox was highest in Miani in Hoshiarpur district (10.73) followed by Hissar (8.70), Bhiwani (4.65), Patti (3.49), Miani in Shahpur District (3.40) and Dasuya (3.04). It was lowest in Panipat town (0.03).



Amongst the largest towns in the Province, Lahore headed the list this year with a death-rate of 0·64, Amritsar coming next with 0·27 and Multan 0·21, the corresponding figures for the previous year for these three towns being 2·82, 0·19 and 0·06, respectively.

The lines adopted to combat the infection were, in brief, as follows :—

- (1) Strenuous efforts were made to push on mass vaccination in the infected localities and their neighbourhood. The measure of success obtained in this connection is given in detail in Chapter IV.
- (2) Extensive propaganda to popularise vaccination and other anti-smallpox measures was carried out through the press, and by means of posters, hand bills, lectures and informal talks.  
This was supplemented by an intensive educational campaign, by organising processions with banners displaying slogans dealing with anti-smallpox measures together with singing parties which recited poems and sang songs specially composed for the occasion.
- (3) The reporting agencies were overhauled and improved to enable the Department to obtain prompt reports with a view to undertake effective action.
- (4) Successful efforts were made to enlist the co-operation of the medical profession which exerted its influence in favour of all anti-smallpox measures specially in regard to vaccination amongst the people.
- (5) Sympathy and active co-operation of Educational institutions, Heads of various Government Departments, managers of workshops, factories, &c., were secured as well as of public-spirited societies and associations to further the cause of vaccination.
- (6) Every endeavour was made to isolate patients (where possible), to disinfect their belongings and infected houses and to advise the contacts and the neighbours to get vaccinated and keep away from infection.
- (7) The services of Lady Health Visitors were organised to popularise and push on vaccination amongst the female population in whom the mortality was higher than in males.

**22. Plague.**—The plague epidemic during the year under report was comparatively mild.

Annual Form No. IX (a)  
and (b).

The total number of reported deaths from plague in the Punjab (British Districts) was 1,789 (757 males and 1,032 females) as compared with 2,003 (865 males and 1,138 females) in the preceding year. The mortality rate calculated on the census population was 0·08 (0·06 male and 0·10 female) *per mille* as compared with 0·09 (0·07 male and 0·11 female) *per mille* during the preceding year and a mean of 0·12 *per mille* in the previous quinquennium.

The death-rate calculated on the estimated population was 0·07 during the year under review.

As regards sex, the female death-rate as usual exceeded the male death-rate by 0·04 *per mille* and is attributable to the fact that females remain mostly inside the houses and are, therefore, more exposed to infection than males who remain mostly outdoors in connection with their daily avocations.

The disease occurred in 8 districts against 10 last year but 1,559 out of 1,789 deaths, i.e., 87 per cent. were reported from Hoshiarpur (955) and Gujrat (604) districts, while the other affected districts returned deaths as indicated against each.

Sialkot	..	..	..	..	..	84
Gurdaspur	..	..	..	..	..	67
Amritsar	..	..	..	..	..	41
Jullundur	..	..	..	..	..	35
Lahore	..	..	..	..	..	1
Gujranwala	..	..	..	..	..	1
Lyallpur	..	..	..	..	..	1 (imported).



The Ambala and Multan divisions remained free from infection throughout the year.

Calculated on the basis of the population involved the disease was more severe in the rural areas (0.08 *per mille*) as compared with the urban areas (0.04 *per mille*).

Among Indian States in the Punjab only Kapurthala State was infected and reported 34 cases with 15 deaths.

As a result of the recrudescence of the disease in autumn of the year 1932, two distinct foci (Hoshiarpur and Gurdaspur) were recognisable in the month of January in the sub-montane tract of the Himalayas. The disease remained well under control during the month of February with the exception that one more district (Gujrat) was involved. In March the infection began to increase and the plague curve showed a marked rise in the month of April when no less than 400 deaths were recorded. The epidemic reached its acme during the month of May, returning as many as 735 deaths after which there was a sudden decline in June (115 deaths) followed by July with 12 deaths only. The Province was declared free of infection during the month of August but the disease recrudesced in September and continued to increase till the end of the year.

The four districts of Hoshiarpur, Gurdaspur, Sialkot and Gujrat were chiefly involved as in the previous year and the intensity of the incidence in them may be gauged from the following statement :—

District.	Deaths.	Rate <i>per mille</i> .	Average of last 5 years.	Inoculations.
Hoshiarpur .. .. .	955	0.93	0.56	44,608
Gujrat .. .. .	604	0.65	0.02	30,331
Sialkot .. .. .	84	0.09	0.29	13,082
Gurdaspur .. .. .	67	0.07	0.78	5,101

Of the 3 largest cities of the Punjab (*viz.*, Lahore, Amritsar and Multan) only Multan escaped infection.

The disease was mainly of the bubonic type but cases of pneumonic and septicæmic plague were also reported from some localities.

Anti-plague measures were vigorously conducted on the usual lines and call for little comment.

Intensive rat destruction was carried out during the off-season in the potential epidemic foci and the villages in their immediate neighbourhood. In addition to Bhoosa Battis, Cyano dust was extensively employed to destroy rats.

The number of persons inoculated against plague was 133,747 as compared with 91,600 in the previous year. The highest number of plague inoculations was performed in Hoshiarpur District.

The Public Health Staff made strenuous efforts to persuade the people of plague-infected villages to evacuate their houses or to live in courtyards and on the roofs during epidemic days. Two villages in Gurdaspur were completely evacuated and the people resided in huts set up outside the villages. In Gujrat district this measure did not prove a success partly on account of want of accommodation outside the villages but mainly through the obstructive attitude adopted by some Muslim religious teachers who wrongly objected to evacuation as against the religion of Islam. The assistance given by the Police Department in this district under the instructions of Mr. W. D. V. Slessor, Superintendent of Police, in reporting the outbreaks of plague was very effective and needs special mention. Fumigation as well as disinfection of infected houses was also attempted with marked success.



23. **Fevers.**—The deaths registered during the year under the head "Fevers" numbered 460,731 as compared with 388,427 in the previous year. The mortality rate was 19·64 *per mille* (18·40 male and 21·09 female) as compared with 16·56 *per mille* (16·06 male and 17·15 female) in the previous year and a mean death-rate of 16·59 during the preceding quinquennium. The death-rate calculated on the estimated population was 18·75 during the year under review.

The unhealthiest month in respect of mortality from fevers was November, when 74,672 deaths were recorded. The next worst was October with 62,340 deaths. December followed with 55,188, June 35,702, January 34,133, September 33,422, May 31,148 and July 29,564. The lowest mortality was recorded in April (24,891) the next in order being March (25,896), August (26,230) and February (27,545).

That the highest mortality was recorded in the months of October, November and December is significant of the fact that the great increase in deaths under this head during the year under report was mainly due to malaria.

The districts exhibiting a fever death-rate above the provincial mean of 16·59 were Gujranwala 37·40, Karnal and Mianwali 25·56 each, Sheikhpura 25·39, Muzaffargarh 24·14, Rohtak 22·79, Gujrat 22·58, Attock 22·27, Shahpur 22·17, Hissar 22·11, Gurgaon 22·09, Dera Ghazi Khan 21·61, Sialkot 20·76, Jhelum 20·60, Multan 20·21, Hoshiarpur 19·03, Montgomery 18·52, Ferozepore 18·16, Jullundur 17·71, Lyallpur 17·54, Amritsar 17·41, Gurdaspur 17·09 and Rawalpindi 17·05.

The fever death-rate of 175 towns was 10·58 as compared with 9·87 in the preceding year. The three largest cities of the Punjab, Lahore, Amritsar and Multan recorded fever death-rates of 7·70, 10·23 and 6·66 *per mille*, respectively as compared with 7·85, 10·45 and 3·12 *per mille* in the preceding year and a quinquennial average of 9·24, 14·70 and 10·45 *per mille*.

The urban and rural death-rates from fevers were 10·58 and 20·92 as compared with 9·87 and 17·59 in the preceding year and 12·07 and 18·80 in the last 5 years.

In the case of smaller towns rates as high as 61·35 were recorded in Dharamsala Cantonment, 36·93 in Shahpur, 36·08 in Ahmadpur and 32·66 in Karor. The lowest rates were registered in Sanawar Civil Line 0·92, Ambala Civil Line 0·98, Simla 1·05 and Budhlada 1·55.

24. (a) **Malaria.**—The rainfall conditions were favourable to the spread of malaria and it was, therefore, anticipated that a malaria epidemic of considerable intensity would develop in the central parts of the Province, specially involving the districts of Amritsar, Sialkot, and Gujrat and major parts of Gurdaspur, Gujranwala and Jhelum districts. Isolated foci of moderate intensity were also expected to develop more particularly in the flooded areas along the Jumna, Sutlej and Indus rivers.

On the basis of this knowledge anti-malarial measures on the usual approved lines were carried out especially in the districts threatened to be visited by a malaria epidemic so as to reduce its intensity during the autumnal months. In this connection 2,785½ lbs. quinine and 849 lbs. of Cinchona febrifuge were distributed in rural areas by the Public Health Staff through the agency of 798 depôts and 5,630 sub-depôts. These depôts were replenished from time to time by District Medical Officers of Health who were provided by their respective local bodies with sufficient stocks of quinine. The Public Health Department, Punjab, also issued 497½ lbs. of quinine free of cost in the Province.

Owing to inundation of rivers and exceptionally heavy rainfall, extensive areas of Rohtak, Gurgaon and Karnal districts were flooded in the third week of September 1933. The intensity of malaria in these districts was greatly aggravated not so much by new infections as by relapses of old infections brought about by the debilitating conditions due to floods, exposure to chill and accentuated by anxiety caused by extensive loss of property, falling of a very large number of dwelling houses and by scarcity of food as a sequel to the soiling and decomposition of hoarded grain in the homes and destruction of crops in the fields.



The relief operations organised on an unparalleled scale to alleviate suffering included very elaborate anti-malaria operations in the distressed areas. For the first time in the history of the Province an attempt was made to give a course of *quinine treatment* to each patient comprising—

- (1) one dose of Mag. Sulph.,
- (2) three doses of alkaline quinine mixture for the first day, and
- (3) nine quinine pills for the three following days.

Thus a four days course of treatment was given to a patient which was repeated where necessary. The measure of success achieved may be judged by the fact that during the short period of 6 to 8 weeks, when the relief works were in operation in the three districts of Rohtak, Karnal and Gurgaon, a determined endeavour was made, from 65 centres and 378 depôts established, as well as from other agencies to—

- (a) reach 3,023 villages,
- (b) pay about 13,270 visits to these villages,
- (c) carry relief to about 378,379 known malarial patients, and
- (d) distribute 1,017 lbs. of Quinine Sulphate and Cinchona febrifuge.

The extra staff loaned by the Government as well as employed by the local bodies is detailed in the following statement :—

District.	Designation.	Government Staff.	Staff employed locally.
Rohtak ..	District Medical Officers of Health ..	2	..
	Sub-Assistant Health Officer ..	1	..
	Sanitary Inspectors ..	22	..
	Plague Supervisor ..	..	1
	Superintendent of Vaccination ..	..	1
	Health Relief Workers ..	..	55
	Menial Labour ..	..	85
Gurgaon ..	Sub-Assistant Health Officers ..	2	..
	Sanitary Inspectors ..	8	..
	Superintendents of Vaccination ..	..	1
	Vaccinators ..	..	15
	New Staff employed ..	..	10
Karnal ..	Sub-Assistant Health Officers ..	2	..
	Sanitary Inspectors ..	2	..
	Superintendent of Vaccination ..	..	1
	Vaccinators ..	..	13
	Plague Mates ..	..	3
	New men temporarily engaged ..	..	25
	Coolies ..	..	9

25. (b) **Relapsing Fever.**—During the year under report the disease was detected in 3 districts, viz., Amritsar, Sialkot and Montgomery, in none of which it assumed epidemic proportions.

The total number of recorded cases during the year was 25 as compared with 16 reported in the preceding year. No death was recorded from the disease during the year under report as in the past year.

26. (c) **Influenza.**—Cases of a mild catarrhal fever which may be regarded as a mild type of influenza were reported from 7 districts in the Province. There were 2,311 cases and 2 deaths (1 each in Montgomery and Multan districts) as against 3,555 cases and 13 deaths in the preceding year.

27. **Dysentery and Diarrhœa.**—There were 12,345 deaths from dysentery and diarrhœa, accounting for a death-rate of 0.53 *per mille*. The corresponding rate for the previous year and the quinquennial average being 0.57 and 0.54 respectively. Kangra



exhibited the highest death-rate of 3·18, while the lowest rate 0·09 was recorded in Muzaffargarh. The provincial death-rate (0·53) was exceeded in 7 districts, namely, Kangra (3·18), Rawalpindi (2·85), Simla (1·41), Multan (0·99), Lahore (0·69), Sialkot (0·64) and Hoshiarpur (0·56). The death-rate calculated on estimated population amounted to 0·50 *per mille* in the year under review.

The urban and rural death-rates were 1·29 and 0·42 as against 1·17 and 0·47, respectively for the preceding year. The death-rates of 10 large towns of the Province were :—

Ambala 2·07, Jullundur 1·35, Ludhiana 1·79, Ferozepore 1·23, Lahore 1·42, Amritsar 0·80, Sialkot 2·24, Rawalpindi 1·68, Lyallpur 0·65, and Multan 5·85.

**28. Respiratory Diseases.**—The diseases of the respiratory system accounted for 55,337 deaths or 2·36 *per mille*, which constitutes a decrease of 0·21 and an increase of 0·04 as compared with the death-rate of the previous year and the mean death-rate during the preceding five years. The provincial death-rate was exceeded in eight districts. The excess was most marked in Simla, 10·79 followed by Ambala (6·43), Kangra (5·78), Amritsar (5·22), Sialkot (4·16), Lahore (3·17), Rawalpindi (2·96) and Gurdaspur (2·95). The lowest death-rate (0·51) was recorded in Hissar. The death-rate calculated on the estimated population amounted to 2·25 in the year under review.

The urban and rural death-rates were 4·57 and 2·05 respectively as against 4·48 and 2·27 in the previous year.

No reliance can, however, be placed on figures registered under this head as most of the respiratory diseases specially the pulmonary tuberculosis are returned under the head 'Fevers.'

**29. Pulmonary Tuberculosis.**—Although this disease is reported to be on the increase both in the urban and rural areas in the Punjab, no accurate information as regards its prevalence can be made available until a systematic survey is carried out throughout the Province to collect data for this purpose. The inquiry into the incidence of tuberculous diseases and the environmental and economic conditions associated therewith which was started in Mozang (Lahore district) during the year 1932 under the auspices of the anti-Tuberculosis Sub-Committee, Punjab Branch, Lahore, with the Director of Public Health as its Chairman and Khan Bahadur Dr. A. H. Butt, D.P.H., Assistant Director of Public Health as its Honorary Secretary, was continued throughout the year 1933. The funds for this year, as was the case during the preceding year, were kindly supplied by the Managing Body of the King-George's Thanks Giving (anti-Tuberculosis) Fund.

During the year the Officer Incharge assisted by one male and one female doctor carried out a systematic door to door enquiry work in the remaining area for the study of the factors associated with this disease and discovered 237 cases.

The dispensary which was started last year continued to function throughout this year. It helped to a large extent in the diagnosis of cases, in their symptomatic treatment and in carrying out propaganda work on the prevention of the disease in the *ilaga*. A complete set of photographs for the preparation of magic lantern slides therefrom, as well as a lecture in English were also prepared for propaganda. During the year a number of leaflets and charts on prevention of the disease were also distributed in schools and amongst the medical practitioners. The work of the enquiry was completed by the end of November and the report is under preparation.

**30. Diphtheria.**—Sporadic cases of diphtheria continued to occur during the year more especially in the hills and in the northern districts of the Punjab. The disease during the year under report prevailed in the districts of Rawalpindi (29 cases and 20 deaths), Jhelum (36 cases and 16 deaths), Lahore (23 cases and 5 deaths), Simla (15 cases and 3 deaths), Ludhiana and Lyallpur (7 cases and 1 death each), Mianwali (6 cases and 4 deaths), Amritsar (6 cases and 1 death), Montgomery (2 cases and 2 deaths), Attock (2 cases and 1 death) and Gurdaspur one case only. Altogether 134 cases and 54 deaths were reported as against 85 cases and 37 deaths in the preceding year. The disease was vigorous-



ly combated as a result of which it did not assume serious epidemic proportions anywhere.

In Murree hills diphtheria appeared in the Royal Air Force Colony, where an Englishman, who had received infected papers from home, fell sick on the 2nd August. People from the adjoining villages, serving this colony as labourers, carried the disease to their homes, and thus it was reported from the village of Gehl where 9 cases and 3 deaths occurred from this disease. A little later the villages of Masot and Chatra Dunga were also infected. The whole-hearted co-operation of the public in fighting out this deadly and distressing disease in Rawalpindi district was a great inspiration to the field workers of the department.

**31. Injuries.**—Under this head 7,013 deaths were registered during the year under review, giving a rate of 0·30 *per mille* as compared with 6,633 and 0·28, respectively, in the preceding year.

The deaths were classified as under :—

	Males.	Females.	Total.
Suicide .. .. .	202	172	374
Wounds .. .. .	728	164	892
Accidents .. .. .	2,770	2,110	4,880
Rabies .. .. .	124	35	159
Snake bites and killed by wild beasts ..	544	164	708
Total .. .. .	4,368	2,645	7,013

The increase in the number of fatal accidents is due to the greater use of motor vehicles and electricity.

From the subjoined statement it would appear that deaths recorded under this head vary little from year to year and admit of little mis-classification :—

1924 .. .. .	6,498	1929 .. .. .	6,636
1925 .. .. .	6,449	1930 .. .. .	6,103
1926 .. .. .	6,514	1931 .. .. .	6,110
1927 .. .. .	6,776	1932 .. .. .	6,633
1928 .. .. .	7,306	1933 .. .. .	7,013

**32. Hydrophobia.**—As usual the recorded number of deaths from hydrophobia was more amongst males than in females (124 males and 35 females). During the year 2,729 patients (82 Europeans and 2,647 Indians) underwent anti-rabic treatment at the Pasteur Institute, Kasauli, as compared with 6,905 (90 Europeans and 6,815 Indians) in the previous year. In addition 3,669 persons (270 Europeans and 3,399 Indians) underwent the treatment at the King Edward Medical College, Lahore, as compared with 2,567 (233 Europeans and 2,334 Indians) in the preceding year. Anti-rabic treatment at Rawalpindi Centre was given to 309 patients (201 Europeans and 108 Indians) against 338 (234 Europeans and 104 Indians) in the year 1932.

Several cases of rabies occurred amongst human beings and animals in Muzaffargarh district during the year. As the disease at Rangpur (Muzaffargarh District) was taking a serious turn, the District Medical Officer of Health personally visited that area and made special arrangements through the Civil Surgeon to send help to the needy. As soon as an anti-rabic treatment centre is established at every district headquarter hospital most of the difficulties will be removed, but District Boards should provide staff for killing stray dogs through the Veterinary Assistants as a routine measure.

**33. All Other Causes.**—The aggregate number of deaths recorded from all other causes was 111,541 (59,117 males and 52,424 females) as against 102,983 (54,377 males and 48,606 females) in the year 1932. The death-rate recorded for the year was 4·75 as compared with 4·39 in the previous year and is 0·24 *per mille* more than the quinquennial average. The death-rate calculated on the estimated population amounted to 4·54 *per mille* in the year under review.



The highest rates were reported in Gurgaon, 10·2, Ludhiana, 10·1, Simla 9·6, Gurdaspur, 9·4, Hissar and Lahore, 6·6 each, while the lowest rates were recorded in Muzaffargarh, 1·7, Dera Ghazi Khan, 2·0, and 2·3 in Rawalpindi.

(a) *Ankylostomiasis*.—The prevalence of Hookworm infection in the Punjab had remained unsuspected until recently. The matter was brought to the notice of Public Health Department in 1929. A rapid survey of a number of villages in Shakargarh tahsil of Gurdaspur district definitely established the existence of the infection.

Under the supervision and direction of the Epidemiologist to Government, Punjab, a start to investigate the disease in Gurdaspur district was made in December, 1932. Anti measures to combat the infection were carried out in the district with the help of a Sub-Assistant Health Officer who collected stools and sent them to the Punjab Epidemiological Bureau, Lahore, for examination. The results were communicated to the Sub-Assistant Surgeon on Hookworm duty who administered the treatment.

Out of 11,109 stools examined (collected from 46 villages of Shakargarh tahsil), 9,013 or 81·1 per cent. were found positive for hookworm ova. The incidence rate in different villages varied from 56·9 to 95·7 per cent. Those found carrying hookworm ova were treated with carbon-tetrachloride and oil of chenopodium.

A scheme for giving mass treatment to the inhabitants of Shakargarh tahsil has recently been sanctioned by Government, and the work started with staff specially recruited for the purpose under the supervision of the Epidemiologist to Government, Punjab.

(b) *Leprosy*.—Leprosy surveys continued to be carried out with the aid of funds provided by the British Empire Leprosy Relief Association during the year under report. During the first half of the year, Dr. S. S. Jaikaria, M.B., B.S., Leprosy Officer, carried out leprosy surveys in Kangra district and thereafter he was deputed to survey Lahore district. In view of the fact that the district of Kangra is the chief, if not the only endemic area in the Province, it was considered necessary that a Leprosy Officer should be posted there. Consequently, it was decided that Dr. B. L. Malhotra, M.B., B.S., Medical Officer, Leper Home, Palampur, should hold additional charge of the district as District Leprosy Officer.

During the year under review 970 villages in Kangra district and 372 villages in Lahore district, including Lahore and Baghbanpura Municipalities, were completely surveyed. In 52 out of 1,342 villages surveyed, 143 cases of leprosy in different stages of the disease were detected. In addition 144 villages in Kangra district were visited by Dr. Malhotra.

During the year under report Dr. Jaikaria opened 5 outdoor clinics at the existing dispensaries in tahsil Dehra Gopipur, while 2 were opened by Dr. Malhotra. All the clinics are administering free treatment to the patients. The public and the patients have now begun to realize that leprosy, so far considered to be an incurable disease, can be cured if proper attention is paid to its treatment in the early stages.

#### CHAPTER IV.—Vaccination.

(This Chapter and all the statistical tables connected with vaccination refer to the period—April 1st, 1933 to March 31st, 1934,—instead of the Calendar year 1933).

34. **Administration.**—No important change in the administrative or other arrangements in connection with vaccination took place in the period under review. The total number of Superintendents of Vaccination and Vaccinators employed by local bodies during the year 1933-34 and 1932-33 was as follows :—

		1933-34.	1932-33.
Superintendents of Vaccination	.. ..	45	41
Vaccinators	.. ..	593	554



The number of Superintendents of Vaccination increased by 4, i.e., one each in Jullundur, Amritsar, Gujranwala and Jhelum districts. The number of vaccinators employed by the District Boards showed a net decrease of 21, an increase of 12 being associated with a decrease of 33. There was an increase of 5 in Hissar, 2 each in the districts of Attock and Mianwali and 1 each in Simla, Lyallpur and Jhang. Reduction of 6 vaccinators each was brought about in Gurdaspur and Shahpur, of 4 each in Lahore and Gujranwala, of 3 in Ludhiana, of 2 each in Sheikhupura, Montgomery and Multan and of one each in Jullundur, Ferozepore, Amritsar and Dera Ghazi Khan districts. As some of the Hill States (which used to be visited by the Special Staff) were permitted to make their own arrangements for vaccination the strength of the Provincial Staff was reduced from 2 Superintendents of Vaccination and 20 vaccinators to one Superintendent of Vaccination and 13 vaccinators with effect from 21st January 1934. The average number of vaccinations performed by each vaccinator was 5,880 as compared with 6,350 in the preceding year. The figure for the year 1931-32 was 3,236 only.

**35. Number of Vaccinations.**—The total number of operations performed by all establishments during the period under review was 3,206,356 as compared with 3,607,285 in the previous year and 1,718,983 in the year 1931-32. There was thus a decrease of 400,929 operations in the year under review as compared with the previous year and an increase of 1,487,373 operations over the year 1931-32. Of the total number of operations 950,385 were primary and 2,255,971 re-vaccinations against 1,003,564 and 2,603,721, respectively, in the preceding year and 903,217 primary and 815,766 re-vaccinations in the year 1931-32. The total number of deaths registered from small-pox in 1933-34 amounted to 6,990 giving a death rate of 0.30 against 9,726 indicating a death rate of 0.41 during 1932-33. There were 1,042,624 births and 200,755 deaths (under one year of age) registered in the Province in the year 1933. The annual number of vaccinations performed in the Punjab since the year 1885-86 together with the number of operations *per mille* of population is shown in Chart VII. From a scrutiny of this chart it will be seen that the number of primary vaccinations was 53,179 less than the preceding year and exceeded by 47,168, the figure for the year 1931-32. The number of re-vaccinations in 1933-34 was also smaller by 347,750 than the figure for the previous year, although it was 1,440,205 in excess of the number performed during the year 1931-32, which at that time held the record.

It may be pointed out here that the number of vaccination operations is not, to be exact, an absolute figure for purposes of comparison independent of other factors. While primary vaccinations are dependent on the number of births, both primary and re-vaccination operations are materially influenced by the incidence of small-pox. Judged in this light, the record during the year would exhibit better results than those obtained in the last year of unprecedented success :—

	Number of deaths from small-pox.	Number of total vaccination operations.	Number of vaccinations per death of small-pox.
1932-33	9,726	3,607,285	370.9
1933-34	6,990	3,206,356	458.7

It will thus be manifest that compared with the intensity of infection prevalent, the record of vaccination operations was more brilliant than that of the previous year.



The decrease in the number of operations during the year is entirely attributable to the fall in the municipal areas as compared with the rural ones :—

	Total number of operations in the Province.	Number of operations performed by the Muni- cipal staff.	Number of operations in rural areas.
1932-33 .. .. .	3,607,285	713,259	2,894,026
1933-34 .. .. .	3,206,356	305,178	2,901,178
Difference .. .. .	—400,929	—408,081	+7,152

Thus the vaccination record of the rural areas exceeded that of the last year by 7,152 showing that the organised efforts made by the Department show no sign of abatement inspite of the fact that there was a reduced prevalence of small-pox infection during the year.

The reduction in the Municipal areas was distributed as follows :—

	Primary vaccinations.	Re-vaccination operations.
1932-33 .. .. .	116,708	596,551
1933-34 .. .. .	99,044	206,134
Difference .. .. .	—17,664	—390,417

Thus the decrease was solely the result of fall in re-vaccination carried out in the Municipal towns.

It must, however, be stated in this connection that the present field for re-vaccination is not so vast in the urban as in the rural areas. In fact the scope for re-vaccination in the towns where people of all ages had been re-vaccinated owing to epidemic conditions on a very large scale during the last year (the relevant population figure remaining the same) was fairly limited and most of those amenable to operation either by reason of their education or through influence or as a result of propaganda had already been vaccinated and needed no such preventive measure during the year under report, thus rendering the reduction inevitable. The influence of vaccination on the incidence of smallpox is shown in chart VIII, where smallpox death-rate of each district and the proportion of population successfully vaccinated are contrasted.

(1) *District and Municipal Staff.*—The total number of operations performed by the vaccination staff of District Boards and Municipal Committees was 3,124,403 as compared with 3,454,422 in the previous year and 1,634,522 in the year 1931-32. The number of primary and re-vaccinations was 924,423 and 2,199,980, respectively, which represents a decrease of 43,864 in primary and 286,155 in re-vaccinations as compared with the previous year, and an increase of 53,172 in primary and 1,436,709 in re-vaccinations compared with the year 1931-32.

The number of men and women re-vaccinated during the year 1933-34 was 1,454,543 and 745,437 respectively.

Out of the 29 districts in the Province, no less than 10 recorded increase in the number of primary vaccinations as compared with the previous year, the most conspicuous being Ambala (5,357), Gurdaspur (4,704), Dera Ghazi Khan (4,279), Hoshiarpur (2,625) and Jullundur (2,620).

The figures in respect of re-vaccination show an increase, as compared with the previous year, in 14 districts, the largest increase being recorded in Gurgaon (117,331), Ludhiana (57,453), Jhang (35,926), Gurdaspur (28,232) and Muzaffargarh (26,550).



A study of Appendix II to Vaccination Statement No. 1 will show that the largest number of vaccinations were performed in Montgomery district (196,645), Gurgaon coming next with 179,483, closely followed by Amritsar (174,257) and Muzaffargarh (170,050).

(2) *Municipal Staff*.—In the case of Municipal towns, the total number of operations performed by Municipal vaccinators during the period under review was 305,178, of which 99,044 were primary and 206,134 were re-vaccinations, as compared with 713,259 (116,708 primary and 596,551 re-vaccinations) in the previous year and 165,412 (91,043 primary and 74,369 re-vaccinations) in the year 1931-32.

(3) *Special Staff*.—The total number of operations performed by the special staff (Provincial) during the year under review was 62,910 as compared with 82,285 during the previous year and 54,992 in the year 1931-32.

The number of primary operations was 20,495 as compared with 26,603 in the previous year and 25,130 in the year 1931-32 whilst the number of re-vaccinations was 42,415 as compared with 55,682 and 29,862 in the preceding two years. There was a decrease of 6,108 in primary and 13,267 in re-vaccinations when compared with the last year and a decrease of 4,635 in primary and an increase of 12,553 in re-vaccinations when compared with the figures for 1931-32. The decrease was due, partly to the reduction in the personnel of the Special Vaccination Staff and the area under its jurisdiction and partly to the employment of the members of the staff for duty in connection with the Sun Eclipse Fair at Thanesar.

(4) *Dispensary Staff*.—During the year 1933-34 the number of primary and re-vaccination operations performed by medical officers in charge of dispensaries was 2,785 (644 primary and 2,141 re-vaccinations) as compared with 9,435 (1,715 primary and 7,720 re-vaccinations) in the previous year.

(5) *Cantonment Staff*.—In cantonments the total number of operations carried out during the year under review was 16,258 (4,823 primary and 11,435 re-vaccinations) as compared with 61,143 (6,959 primary and 54,184 re-vaccinations) in the previous year.

(6) *Railway Medical Staff*.—During the year under review 1,430 vaccinations (458 primary and 972 re-vaccinations) were carried out by the Railway Medical Officers amongst persons residing in areas under the jurisdiction of the North-Western Railway. The corresponding figure for the previous year was 5,391 (1,098 primary and 4,293 re-vaccinations).

36. **Cost of the Department**.—The total cost of vaccination, including the cost of the Special Vaccination Staff and the Punjab Vaccine Institute, incurred during the year was Rs. 3,79,816-4-3 as compared with Rs. 3,46,750-12-8 during the previous year. The increase of Rs. 33,065-7-7 was mainly due to the increased expenditure by the local bodies under the head 'Contingencies.' Calculated on these figures the average cost of each successful vaccination in the Punjab was Re. 0-2-10 as against Re. 0-2-4 in the preceding year.

The average cost of each successful vaccination performed by the vaccination staff of Municipal Committees, District Boards, and Cantonments was Re. 0-2-5 as compared with Re. 0-2-0 in the previous year, the increase of Re. 0-0-5 being due to the smaller number of successful operations performed during the year 2,090,936 as compared with 2,326,206 in the previous year. High rates of average cost are reported from Simla, Rs. 2-4-7, Shahpur, Re. 0-5-11, Hissar, Re. 0-4-1, Rawalpindi, Re. 0-3-6 and Sheikhpura, Re. 0-3-4. The average cost of each successful operation carried out by the Special Staff was Re. 0-10-4 as compared with Re. 0-7-4 in the preceding year. The increase of Re. 0-3-0 is due to the smaller number of successful operations performed during the year (37,141) as compared with 49,692 in the previous year.

37. **Success of Vaccination**.—The potency of the vaccine lymph was, as usual, extremely satisfactory. The percentage of success in the case of primary vaccinations and re-vaccinations reported by all establishments was 98·14 per cent. and 69·30 per cent. as compared with 98·36 per cent. and 69·79 per cent., respectively, in the preceding year.



The results reported by the various establishments were as follows :—

				Primary vaccination.	Re-vaccina- tion.
District and Municipal Staff	..	..	..	98·15	69·51
Special Staff	..	..	..	97·31	54·59
Cantonment Staff	..	..	..	99·25	81·03
Dispensary Staff	..	..	..	96·55	84·47

38. **Vaccination Inspections.**—The number of vaccinations inspected by Assistant Directors of Public Health was 1,942 primary and 1,042 re-vaccinations, the percentage of success being 94·08 and 40·60, respectively.

Civil Surgeons, District and Municipal Medical Officers of Health inspected 150,173 primary vaccinations and 255,270 re-vaccinations as compared with 174,157 primary and 390,265 re-vaccinations during the previous year, the reported success rate being 97·11 per cent. and 58·13 per cent., respectively. Superintendents of Vaccination inspected 412,392 primary vaccinations and 628,578 re-vaccinations, the percentage of success being 97·37 and 58·78, respectively. The success rate reported by vaccinators themselves was 98·14 in the case of primary and 69·30 per cent. in re-vaccination.

39. **Vaccination in Indian States in the Punjab.**—The reports received from the Indian States that employ their own vaccinators are summarised below :—

State.			NUMBER OF VACCINATIONS.		SUCCESS RATE.	
			Primary.	Re-vaccina- tion.	Primary.	Re-vaccina- tion.
Patiala	..	..	62,659	45,626	99·31	75·55
Kapurthala	..	..	9,110	6,131	97·62	53·94
Faridkot	..	..	6,088	1,219	98·64	44·78
Jind	..	..	11,076	Nil.	99·28	Nil.
Bahawalpur	..	..	23,248	1,095	99·87	80·25
Nabha	..	..	7,305	208	95·60	51·37

40. During the year the provisions of the Vaccination Act were extended to the following localities :—

- (1) Hissar district .. .. Such parts of the local areas within the police stations of Narnaund, Hansi, Bahuna, Ratia, Hissar, Tohana, Dabwali, Rori and Bhiwani as are subject to the authority of the District Board.
- (2) Gurgaon district .. .. Local areas subject to the authority of the District Board to which the said Act had not been already extended.
- (3) Hoshiarpur district .. Local areas subject to the authority of the District Board.
- (4) Sankatra .. .. Small Town.
- (5) Gujranwala district .. Local areas subject to the authority of the District Board.
- (6) Sheikhpura .. .. Ditto ditto.
- (7) Mandi Baha-ud-Din .. Small Town.
- (8) Khaur .. .. Notified Area Committee.
- (9) Shorkot .. .. Small Town.
- (10) Multan district .. .. Such parts of the local areas subject to the authority of the District Board to which the Act has not already been extended.
- (11) Jatoi .. .. Small Town.



At present out of 29 districts in the Province, the Vaccination Amendment Act of 1929 has been extended to 19 districts completely and 7 partially. The table below shows the number of Municipal, Small Town and Notified Area Committees to which the Vaccination Act has been extended :—

	Total number.	Number to which the Act has been extended.
Municipal Committees .. .. .	111	104
Small Town Committees .. .. .	114	86
Notified Area Committees .. .. .	24	24

In the year under review 53 private individuals, 34 Sanitary Inspectors, 10 members of the Lady Health Visitors Class and the students of the M.B. B.S. class were trained in the technique of vaccination.

**41. Women Vaccinators.**—Women vaccinators were engaged by the Municipal Committees of Ferozepore, Lahore, Kasur, Amritsar, Sialkot and Multan, during the year under report, while Lady Health Visitors helped in vaccination in the towns of Rohtak, Simla, Jullundur, Ludhiana, Ferozepore, Lahore, Khem Karan, Baghbanpura, Ambala and Sialkot and in the districts of Gurgaon, Ambala, Kangra and Attock.

The total number of vaccinations performed by them was 25,256 (9,465 primary and 15,791 re-vaccinations).

## CHAPTER V.—Urban and Rural Sanitation.

### URBAN SANITATION.

**42.** The sanitary works under construction and completed during the year 1933 are detailed in the Annual Report of the Superintending Engineer, Public Health Circle, Punjab (Appendix I), which shows that 8 sanitary projects (6 detailed projects and 2 preliminary projects) on behalf of Government and 28 Contribution Works (15 detailed projects and 13 preliminary projects) on behalf of the local bodies were prepared by the Public Health Circle during the year 1933.

This list of the sanitary works under construction or contemplated is satisfactory in view of the financial stringency prevailing for the last few years. Although there has been some improvement in the upkeep of Municipal Works in the course of the past decade, the general standard of maintenance and operation is still below that which should be aimed at and efficiency and good sanitation suffer in consequence. Local bodies do not yet realize the truth of the adage "that a stitch in time saves nine." It is hardly possible to gauge from these bare statements the transformation that is steadily taking place in the improvement of sanitary condition of many towns in this province. But it cannot be too often affirmed that unless these sanitary works are efficiently and adequately maintained, they will fail to exercise the material effect upon public health which they are expected to do. The drainage, water-supply and conservancy arrangements in Municipal towns, in spite of the attention of the local bodies being repeatedly drawn by the inspecting officers of the Department and of the public health engineers, still remain primitive and unsatisfactory.

**Income and Expenditure.**—The total income of Municipal Committees (111 in number) after excluding the opening balance of Rs. 22,42,741 and Rs. 4,98,999 under the head extraordinary receipts and debts, amounted to Rs. 1,83,30,167 as compared with Rs. 1,26,41,869 in the previous year.



The expenditure incurred on public health measures including the amount of grant-in-aid received from Government amounted to Rs. 38,78,078 as compared with Rs. 38,56,303 in the previous year. The percentage of income spent upon public health measures was 29.09, while cost per head of public health measures was Re. 1-8-11 as compared with Re. 1-8-10 in the previous year.

The details in respect of the expenditure upon public health measures during 1932-33 and the previous year are given in the table below :—

	EXPENDITURE.	
	1931-32.	1932-33.
	Rs.	Rs.
<i>Public Health—</i>		
A. Direction .. .. .	2,83,170	2,68,295
B. Vital Statistics .. .. .	18,833	17,172
C. Infant Welfare .. .. .	59,191	52,748
D. Vaccination .. .. .	46,361	59,893
E. Plague and other Epidemic Diseases ..	69,673	61,191
F. Conservancy—		
(1) Removals .. .. .	13,37,159	13,33,103
(2) Disposals .. .. .	1,07,598	1,09,947
G. Drainage .. .. .	4,84,132	6,28,640
H. Control of food supplies—		
(1) Markets .. .. .	25,210	16,105
(2) Slaughter-houses .. .. .	44,619	39,465
(3) Licensing of food supplies .. .. .	245	4
(4) Public Analyst .. .. .	9,082	6,416
J. Burning and burial of paupers .. .. .	12,357	10,828
K. Miscellaneous .. .. .	17,110	20,476
Total .. .. .	25,14,740	26,24,283
<i>Water-Supply—</i>		
A. Direction .. .. .	71,365	56,132
B. Collection of revenue .. .. .	25,211	31,322
C. Cost of canal water .. .. .	36,434	36,521
D. Maintenance .. .. .	8,44,599	8,16,267
E. Loans .. .. .	1,76,576	1,75,523
F. Water-analysis .. .. .	57	4,083
G. Capital Expenditure .. .. .	1,87,321	1,33,947
Total .. .. .	13,41,568	12,53,795

From a scrutiny of the figures given in the foregoing table, it will be seen that an appreciable increase in expenditure occurred mainly under the heads of 'vaccination,' 'drainage' and 'miscellaneous,' whilst the other heads show a decrease except 'conservancy' in which there is an increase under one sub-head "disposals."

In the case of small towns 114 in number, the total income excluding opening balance was Rs. 8,97,803 whilst their expenditure on public health measures including grants-in-aid was Rs. 2,74,789 or 30.61 per cent. of the income.

*Water-supply.*—A statement showing the receipts and expenditure incurred in connection with municipal water works is shown in statement B. Piped water supply has been provided to 42 towns **uptil** the year ending 31st March 1933. The view is widely prevalent that water is a gift of God or at least it should be supplied free of cost by the Government or the local body concerned. The imposition of a water-tax is, in consequence, unpopular. This **unsatisfactory** feature can only be rectified by efficient municipal administration and by realisation on part of the public of their own increasing responsibility in the matter.



*Conservancy.*—The re-organisation of the conservancy of the towns on modern sanitary lines is the one urgent need pressing for action. It has been stressed in previous years' reports, but so far no appreciable improvements have been effected. Financial stringency is hardly the sole stumbling block in a large number of cases. Unintelligent conservatism and resistance engineered by vested interests play a determining role in this connection, in spite of the fact that the public demand for better conservancy methods is getting more vocal and developing strength.

The income from the sale of sullage, nightsoil and town refuse should, to a material extent, suffice to meet the additional cost if things were well managed. But those who benefit under present conditions somehow always manage to render all efforts at improvement ineffectual either by misrepresentation or by influence and ingenuity or by subtle procrastination. Every year schemes are suggested by the officers of the Public Health Department in their inspection reports on urban sanitation, but hardly any local body has seriously endeavoured to give effect to them except by recording pious resolutions.

The installation of water flushed latrines and urinals is getting popular in large towns.

In the case of 9 towns in charge of whole-time Medical Officers of Health, the total income derived from the sale of sullage and street sweepings amounted to Rs. 1,78,150-2-0.

The number of acres of land irrigated by sewage in 9 towns in charge of the whole-time Medical Officers of Health was 2,362·81 as compared with 2,099·93 acres in the previous year.

*Slaughter-houses.*—Some progress has been made towards the improvement of slaughter-houses and markets, but a large number of them still remain far from satisfactory. The slaughter-houses in many towns are old and dilapidated and new buildings of modern design are urgently needed.

*Infectious Diseases Hospitals.*—The provision of infectious diseases hospitals in all large towns for isolation and treatment of cases suffering from infectious diseases, is one of the civic needs of the day. Section 142 of the Punjab Municipal Act, as recently amended in 1933, provides that the Committee shall, if required by the local Government, erect an infectious diseases hospital of such type and dimensions as the local Government shall deem expedient. The operation of this section is a problem for the future.

#### RURAL SANITATION.

43. During the year under report more energetic efforts were made by the Department in this connection, handicapped as it was by the prevalence of epidemics like small-pox and plague in a number of districts where all the available staff had, of necessity, to restrict its activities in their control to the exclusion of all other work.

(a) *Propaganda.*—The District Medical Officers of Health and under their direction the Sub-Assistant Health Officers and the Sanitary Inspectors in each and every district of the Province carried out intensive propaganda work on public health matters, by means of lectures, talks, distribution of literature and use of posters. No less than 6,934 lectures were delivered mostly illustrated with magic lantern slides.

Village schools and Boy Scouts were very useful adjuncts in this work. They arranged singing parties and processions to exhort the public to follow rules of health. The fairs held in the Province were also utilized for the purpose and health shows were put up to demonstrate to the gatherings the principles of health by means of expressive suitable models. The press is a very useful medium for educating the public and monthly journals and weekly newspapers dealing with health and kindred subjects for the special benefit of rural areas are at present published in Muzaffargarh, Ferozepore, Jhelum, Attock, Jhang, Rohtak, Gurgaon, Ambala, Karnal, Gujranwala, Amritsar and Ludhiana districts. The question of starting a monthly journal and purchasing a portable cinema is, at present, under the consideration of District Board, Kangra.



During the year, 11 "Uplift" meetings were held in various parts of Gujranwala district attended by over five thousand persons each. The meetings held at Talwandi Musa Khan and Dilawar were presided over by the Hon'ble Minister for Education and attended by the Commissioner, Lahore Division. The remaining 9 were presided over by the Deputy Commissioner.

In Multan district people are still indifferent towards re-vaccination, because the idea that vaccination is meant for children only is still common in their minds. During the year vigorous propaganda was carried out for re-vaccination and the results were very satisfactory.

The Department is indebted to the Educational authorities, to the various Rural Community Councils, to the organisers of various district journals and to the Red Cross Societies for their willing co-operation in health propaganda.

(b) *Village cleansing and sanitation.*—All the sanitation staff has got standing orders to endeavour to organise a general clean-up of all the villages they have occasion to visit. Every effort is made in this connection to achieve the objective as much as circumstances permit. The results attained, no doubt, vary with the measure of success obtained, but the stir they create has its own usefulness which is not altogether negligible.

Some of the results achieved are given below :—

- (1) The number of villages in which efforts were made to improve sanitation was considerable. In Ambala Circle alone the number was 2,616.
- (2) 60,333 rubbish heaps were removed outside the village abadis.
- (3) 47,404 manure pits were excavated.
- (4) 1,18,128½ feet of pucca drains were constructed out of which 67,217 feet were made in 41 villages of Gujranwala district alone.
- (5) Paving of lanes with pucca bricks is attempted in a large number of villages every year where this is a sanitary necessity. No less than 144,900 square feet of paving was made in Ambala Circle out of which Ludhiana alone contributed 112,624 square feet. In the Gujranwala district no less than 67,217 running feet of pucca drains were constructed in 41 villages and 12,148 square feet of streets were paved with bricks in 13 villages.
- (6) 120 cesspits were constructed in Ambala Circle.
- (7) Opening of ventilators in houses is now a regular feature of the programme and 20,183 ventilators were opened (Ferozepore district alone contributing 18,509).
- (8) 1,027 cowdung stores and 136 Chamar Kunds were removed outside the village abadis in Ambala Circle alone.
- (9) 1,114 Sanitary Sub-Committees were formed.

The impetus given to this kind of work is full of hope, and it was time that the policy of the Department in regard to rural sanitation was laid down in principle for the guidance of local effort, so that progress may develop on standard lines and energies may not be wasted to satisfy individual eccentricities in different districts.

It is pertinent here to point out again that all this work has been done by the District Officers with their meagre present staff with no additional help whatsoever. The exigencies of other needs of the Department cause interruptions in the continuity of work, and it is hoped that when financial conditions permit it may be possible to detail additional staff in each district for purposes of rural sanitation.

(c) *Control of Infectious Diseases.*—The work performed in connection with cholera, plague, small-pox, &c., and the results obtained have already been described under their respective headings. Small-pox prevailed in an epidemic form during the whole of the year, and the public health staff remained busy in combating the disease, and efforts were also made to check its spread by means of free distribution of posters, &c., on the nature of the disease and its prevention.

During the year, 174 villages were infected with plague as compared with 325 last year. Although the total death roll was smaller being 1,680 as



against 1,891 in the year 1932, the relative intensity of infection per village was greater, though less when compared with the urban areas. As already given in detail under the head 'plague' strenuous efforts were made to derat villages, to inoculate the population and to insist on evacuation when circumstances permitted.

Although cholera was reported from no less than 70 villages, its suppression was prompt and effective, recording only 115 deaths or on an average nearly two deaths per village.

Attention was directed to the improvement of the reporting agencies and neglect of duty in this respect on the part of village officials was brought to the notice of the Deputy Commissioners of the districts concerned in each and every case. Exemplary action, in this connection, was taken in Gujranwala district which deserves the high commendation of the Department. The panjotra of ten lambardars was forfeited, 2 patwaris and 7 chaukidars were punished with fine, 1 chaukidar was dismissed and 27 patwaris, 36 lambardars and 74 chaukidars were severely reprimanded. Such co-operation on part of the Executive goes a long way towards early detection of infection, which also implies quick suppression and prevention of the disease from assuming epidemic proportions.

(d) *Improvement of Water-Supply.*—In regard to the improvement of water-supply in villages, 457 parapets were constructed, 191 wells repaired, 31,157 wells were cleaned and 88 hand pumps (in Ambala Circle) were installed, through the efforts of the Public Health Department, a sum of Rs. 55,942-9-3 being spent for the purpose. In addition new wells and hand pumps were also constructed by private individuals at their own cost, the detail of which is given in Appendix III.

In Lyallpur district, on the recommendation of the District Medical Officer of Health, the Killa Gift Fund Trust very kindly gave a sum of Rs. 2,500 to seven villages for the improvement of their sources of water supply.

(e) *Maternity and Child Welfare.*—District Boards were given assistance in the opening of Maternity and Child Welfare centres and training of village dais. The Inspectress of Health Centres visited these institutions from time to time, and efforts were made to improve these centres. Lady Health Visitors supervised the cases conducted by dais, gave instructions to women in mother-craft, treated babies for simple ailments and carried out ante-natal examinations. The number of health centres in the Province rose from 42 to 52 during the year under report, showing an increase of 10 centres. Out of these 52 centres, 35 are situated in rural areas. The District Red Cross Society, Rohtak, apart from opening two Child Welfare centres also erected a pavilion for Ladies Club, Rohtak, and gave donations towards the out-door games of children in this club and in the local Girls High School.

(f) *Rural Fairs.*—Sanitation of rural fairs is carried out on more or less standard lines prescribed by the Department. Not only improvements made in the past are being maintained, but a constant endeavour is made to remedy the more glaring defects as soon as possible. The unsatisfactory financial conditions of most of the District Boards have, however, not permitted material progress during the year under report.

Incineration of nightsoil and rubbish is effected on a larger scale than in the past, in some districts pucca incinerators are being constructed for the purpose. Pucca pan latrines are replacing the age old trenches. Bored-hole latrines have been tried at a number of fairs, since their success had been demonstrated at the Solar Eclipse Fair in August 1933.

Water-supply is being improved and is always well guarded and chlorinated, special precautions are taken to prevent contamination during storage and distribution.

Sale of articles of food and drink is receiving better attention. Certificates of commendation are given to the best shops by the District authorities to encourage healthy competition in keeping the shops clean and sanitary.

Anti-epidemic precautions are taken on all occasions and it is satisfactory to note that no outbreak of any infection occurred at any of these fairs during the year.



(g) *Enforcement of Sanitary regulations and formation of sanitary committees in the villages.*—During the year under report, new and revised sanitary regulations were introduced in five districts (Jullundur, Lahore, Gujranwala, Shahpur and Dera Ghazi Khan).

The number of sanitary committees formed in villages was 1,117 and applications from 840 villages were awaiting sanction of the local bodies in 18 districts at the close of the year.

It is gratifying to note that 398 villages in the Ferozepore district have now a health committee each to look after the sanitation of the village under the guidance of the health staff and will ultimately be nominated as Health Committees under District Board Regulations as soon as these regulations are approved and notified by Government.

(h) *Improvement of general sanitation in the rural areas.*—Special mention must be made of the following officers who have taken great pains in the rural uplift work during the year under report :—

- (1) R. S. Dr. Harnath Singh, D.P.H., District Medical Officer of Health, Ferozepore.
- (2) Dr. W. C. Mathur, D.P.H., District Medical Officer of Health, Rohtak.
- (3) Dr. J. N. Mehra, D.P.H., District Medical Officer of Health, Gurgaon.
- (4) Dr. Kapur Singh, D.P.H., District Medical Officer of Health, Ludhiana.
- (5) Dr. S. Riaz Ali Shah, D.P.H., District Medical Officer of Health, Gujranwala.
- (6) Dr. Jaimal Singh, D.P.H., District Medical Officer of Health, Montgomery.
- (7) Dr. M. M. Khan, D.P.H., District Medical Officer of Health, Jhang.
- (8) Dr. M. L. Dhir, D.P.H., District Medical Officer of Health, Ambala.

#### RELIGIOUS FAIRS.

44. The sanitary arrangements in connection with all the important religious fairs and many others were in the usual manner organised by the District Medical Officers of Health and carried out under their personal supervision and in the case of the more important religious fairs that of an Assistant Director of Public Health. The recommendations made in connection therewith by the said officers were generally adopted by the local bodies as far as the financial position permitted. In addition to measures for the protection and purification of water-supplies, the inspection of food stuffs, the incineration of night-soil, special arrangements were made at large fairs for public health propaganda. The arrangements worked in a satisfactory manner and in no case outbreak of cholera or of any other infectious disease took place at any fair during the year.

Special mention must be made of the Sun Eclipse Fair held at Kurukshetra (Thanesar) in Karnal district during August 1933, which was attended by over five lakhs of people coming from all over India. The fair was held in August during the cholera season and was attended by pilgrims coming from cholera-infected localities in very large numbers. Consequently, it was feared that the disease might be introduced into the fair with danger of its spread throughout the Province. The efficient conservancy arrangements and rigid control of the water-supply, however, averted this danger and there occurred only three imported cases of cholera with one death. A detailed report regarding the sanitary arrangements made at this most important fair has been submitted to Government separately.

#### SCHOOL HYGIENE.

45. During the year 1933, attention was given by the District Medical Officers of Health to the improvement of school hygiene. The Assistant Director of Public Health, Lahore Circle, inspected 3 schools and District Medical Officers of Health 696 schools whilst Municipal Medical Officers of Health inspected 168 schools in all. The inspection reports of the District Medical Officers of Health were sent through the Assistant Directors of Public Health to the Deputy



Commissioners for transmission to the managing bodies whilst the reports of Assistant Directors of Public Health on Government Institutions were forwarded to the Director of Public Instruction and the reports on private schools were sent to the Divisional Inspectors of Schools for transmission to the governing bodies. These inspection reports brought prominently to notice the insanitary environments in which the rising generation was being brought up during their impressionable years of school life. The buildings of many schools were found defective with insufficient light, air and ventilation. Thanks are due to various school authorities and the Education Department for the co-operation shown in the matter in carrying out the suggestions of the officers of this department.

#### FLOOD RELIEF MEASURES.

46. Owing to heavy floods River Jumna inundated its banks which affected the adjacent area of 4 districts. Water drained away quickly in Ambala and Karnal but in Rohtak and Gurgaon the riverain tracts remained inaccessible for a very long time except through water. Gurgaon district suffered heaviest of all.

These conditions were, however, accentuated by an unusually heavy rainfall in the third week of September with a concentrated and continuous down-pour between the 17th and 20th September of varying intensity in all these districts. The calamity was further complicated by the flooding of hill torrents in Ambala and Karnal districts, inundation of monsoon streams in Rohtak and Gurgaon districts, overflowing of jheels in Gurgaon and Karnal districts, as well as failure of the existing storm water system to cope with the extraordinary amount of water in Rohtak and Karnal districts.

Considerable damage was done to property and in rural areas katcha houses collapsed in thousands, varying from 50 to 75 per cent. in a village, stored grain was soiled with debris and rendered unfit for use by subsequent decomposition and extensive harm was done to the crops in the fields and conditions rendered worse by the loss of cattle.

Ambala district suffered the least but in the other 3 districts out of a total of 3,478 villages no less than 3,023 were involved where relief had to be given.

Of the towns Rohtak experienced a calamity unknown within living memory. Comprising as it does of nearly one-third of the population and situated as it is in a depression, the new extension of the town suffered most heavily. The collected water reached at places the depth of 16 feet and remained stagnant for several days. The Government buildings in the town were all involved, the two Hospitals and the Government College being so submerged that they had to be vacated completely.

The sanitary arrangements of these flooded areas were organised on an unprecedented scale by Dr. Arora, Assistant Director of Public Health, Ambala Circle, who was put in charge of the entire operations. He encamped there for 17 days at a stretch and then toured extensively again to supervise the work of the organisations specially set up for the purpose.

The relief was organised from a number of centres located in each and every district according to local requirements, the sites being selected not only with a view to command the more distressed areas quickly but also to afford better facilities of approach and for the supply and distribution of relief to the surrounding country-side which had been extensively flooded.

Each centre was in charge of one Health Relief Worker and equipped with a stock of quinine, mag. sulph., soda bicarb. lime, bleaching powder, pot. permanganate, phenyle, crude oil and anti-cholera medicines, &c. Each worker was required to visit all the villages within his range of jurisdiction at least every 4 to 6 days.

The actual working details of operations varied no doubt in different places according to local conditions and local finances but the programme of work of each and every Health Worker was drawn up personally by the District Medical Officer of Health concerned.

All precautions were taken in time and every effort was made to start operations as soon as the flood conditions had established themselves.

There was not a single case of cholera although from the point of view of the season we were still in the danger zone.



There were few complaints of diarrhoea and dysentery but scabbies was very common and caused great and persistent discomfort to the population affected.

The incidence of malaria was no doubt accentuated in the 3 districts involved but in Karnal and a portion of Gurgaon district, where almost the whole population are malaria carriers, excessive relapses due to flood conditions aggravated the situation. An unparalleled and determined endeavour was, however, made to relieve the suffering caused by this disease, with substantial relief to the people.

#### CHAPTER VI—Administration.

47. **Public Health Staff.**—Khan Bahadur Dr. K. A. Rahman held charge of the office of Director of Public Health, Punjab, from 1st January to 27th February 1933, when he reverted to the post of Assistant Director of Public Health, Punjab (Technical) Vaccination, after making over charge to Major R. C. Malhotra, O.B.E., I.M.S. The latter had remained in charge hardly for 10 months when he suddenly died of heart failure on the 23rd December 1933. His untimely death after devoted service as Assistant Director of Public Health and lately as Director of Public Health, Punjab, was a great loss to the Department. After his death the charge of the office of Director of Public Health, Punjab, was again held by K. B. Dr. K. A. Rahman with effect from the 23rd December 1933, to the end of the year.

The post of Assistant Director of Public Health, Punjab (Technical) Vaccination was held by Major R. C. Malhotra, O.B.E., I.M.S., from 1st January to the afternoon of 27th February 1933 (in addition to that of Assistant Director of Public Health, Rawalpindi Circle) on which date he was relieved by Khan Bahadur Dr. K. A. Rahman, D.P.H., who carried out the work in both capacities during the rest of the year.

The post of Assistant Director of Public Health, Lahore Circle, was held by Dr. A. H. Butt, D.P.H., who also acted as Personal Assistant to the Director of Public Health throughout the year except for two months and twelve days when he remained on leave. During his absence from 20th June 1933 to 31st August 1933, the post was filled by Dr. G. R. Vohra, D.P.H., who was promoted from the cadre of District Medical Officers of Health. Dr. A. B. Arora, M.B.E., D.P.H., held charge of the office of Assistant Director of Public Health, Ambala Circle, throughout the year.

Dr. R. B. Lal remained as Epidemiologist to Government throughout the year under report except for the period, from June 15th to July 31st, when Dr. Yacob, D.P.H., officiated for him.

The sanctioned strength and distribution of the Provincial cadre of the District Medical Officers of Health remained the same as last year except that the substitutes of Dr. A. R. Mehta and Dr. Abdul Hamid, whose services were transferred to the Indian Red Cross Society in 1932, were engaged early in July 1933. On account of the shortage of officers the headquarters of the District Medical Officers of Health, Rawalpindi and Gurdaspur, were transferred in summer to Murree and Dalhousie, respectively, to enable them to carry on work at those hill stations as Municipal Medical Officers of Health in addition to their own duties.

The subordinate provincial Public Health Staff employed under the District Medical Officers of Health in the rural areas consisted of 28 Sanitary Inspectors, one in each district. Besides, a small anti-epidemic staff, comprising 10 Sub-Assistant Health Officers and 15 Sanitary Inspectors, continued to be employed for assistance in combating epidemics in the Province. The staff of Sub-Assistant Health Officers was reduced for 7½ months during the summer by posting 2 out of ten at Tara Devi and Cart Road (below Boileaugunj) Medical Inspection posts—Simla. Additional emergency staff was, however, engaged temporarily from time to time with the previous sanction of the Government to deal with threatened cholera at the Sun Eclipse Fair at Thanesar, to safeguard the health of the people and sanitise the flooded areas in Rohtak, Gurgaon and Karnal districts and to look after the labour employed on the famine test works in Hissar district.

The proposal to provincialise the service of Municipal Medical Officer of Health is still under the consideration of the Punjab Government. The number of whole-time Municipal Medical Officers of Health employed by the selected municipalities was the same as in the last year, i.e., thirteen (including Simla).



The Municipal Committee of Ambala, however, owing to its poor financial condition could not fill up the post of its Medical Officer of Health and Government has now exempted it from the employment of a whole-time Municipal Medical Officer of Health for a period of 3 years. The Municipalities of Rohtak and Gujranwala have so far shown no inclination to appoint a whole-time Municipal Medical Officer of Health, although an offer of a subsidy of 50 per cent. was made to them for 5 years. The District Medical Officers of Health, Gujranwala and Gujrat act as Municipal Medical Officers of Health, Gujranwala and Gujrat and are allowed Rs. 50 per mensem each, as honorarium. The number of Municipalities which employed Assistant and Sub-Assistant Surgeons as their part-time Medical Officers of Health increased by two, thus bringing their number to 26. The number of Municipalities which engaged private medical practitioners is the same as last year, i.e., five, while the number of those which utilized the services of the Civil Surgeons as their *ex-officio* Medical Officers of Health increased by one, i.e., six as compared with five in the previous year.

Appendix VI (a) and (b) which have been introduced at the instance of the Government of India show in detail the strength and distribution of the Health Services in Urban as well as in Rural areas of the Punjab during the year 1933.

48. **Punjab Vaccine Institute.**—Major R. C. Malhotra, O.B.E., I.M.S., held administrative charge of the Punjab Vaccine Institute up to the afternoon of 27th February 1933, when he was appointed as Director of Public Health, Punjab, and was relieved by Khan Bahadur Dr. K. A. Rahman, D.P.H., who filled the post for the remainder of the year. Major H. C. Phillips, I.M.D., remained as Superintendent, Punjab Vaccine Institute, throughout the year.

The total number of vaccine lymph tubes issued from the Punjab Vaccine Institute during the year 1933-34 was 104,260 which is equivalent to 6,776,900 doses as compared with 121,295 tubes or 7,884,175 doses issued during the preceding year.

The decrease of 17,035 tubes is due to the less prevalence of small-pox during the six months of the year under report. The details of the tubes issued during the year is as below :—

Punjab .. .. .	73,310
North-West Frontier Province .. .. .	7,874
Special Staff, Punjab .. .. .	1,392
Punjab States .. .. .	5,447
North-Western Railway .. .. .	640
Military Department in India .. .. .	3,710
Indian States and Foreign countries .. .. .	11,887
Total .. .. .	104,260

The net profit to Government from the sale-proceeds of vaccine lymph was Rs. 63,807-3-0 as against Rs. 81,874-15-3 realised during the preceding year.

Vaccine lymph was prepared and propagated according to the Forster-Java method and there was no change in the method of its despatch.

During the year under review 146 buffalo calves, 17 bovine calves and 22 rabbits were used as vaccinifers, of which 144 buffalo calves, 16 bovine calves and 15 rabbits were successfully vaccinated. The average yield of pulp per animal was greater than during the preceding five years as will be observed from the table below :—

Year.	Buffalo calf.	Cow calf.	Rabbit.
	Grms.	Grms.	Grms.
1928-29 .. .. .	84.0	19.70	.805
1929-30 .. .. .	89.78	22.69	.876
1930-31 .. .. .	113.60	28.70	1.312
1931-32 .. .. .	123.10	25.80	1.900
1932-33 .. .. .	119.18	26.72	1.730
1933-34 .. .. .	140.53	31.46	1.69



The average yield of pulp per animal successfully vaccinated was as under :—

					Grms.
Buffalo-calf	..	..	..	..	140.53
Cow-calf	..	..	..	..	31.46
Rabbit	..	..	..	..	1.69

All the clinical tests in Lahore and Murree were inspected by the Assistant Director of Public Health, Punjab (Technical) Vaccination, and the Superintendent, Punjab Vaccine Institute and lymph was not issued unless the case and insertion success was cent. per cent.

During the period from November 1933 to March 1934, 15 vaccinators and 53 private individuals were trained at the Punjab Vaccine Institute in Elementary Hygiene and the method of preparation of vaccine lymph. In addition to the above, one Sanitary Inspector, 10 Lady Health Visitors and the students of the Sanitary Inspectors' class were given a course of lectures in Vaccination during the winter months.

The Punjab Vaccine Institute maintained its reputation as usual for supplying lymph of a high degree of potency.

**49. The Punjab Epidemiological Bureau.**—The laboratory and field work constituted, as usual, the main function of the Epidemiological Bureau during the year under report. The work done can be classified under the following heads :—

- (1) Malaria investigations, (2) Study of origin and epidemiology of various diseases, (3) Hookworm campaign in Shakargarh Tahsil (District Gurdaspur), (4) Thanesar Sun Eclipse Fair, Kurukshetra, (5) Experimental and routine work and (6) work of an educational nature.

In regard to malaria, an officer from the Bureau made a preliminary visit to the water-logged area in the vicinity of Dipalpur Canal at Ganda-Singhwala in November 1933, in the course of which he found that the spleen rate in village Sada Nizam was 75 per cent. while anopheline larvæ were present in large numbers in all the pools and seepage drains connected with Dipalpur Canal and in the bed of the abandoned Katora Canal. The work, though given a good start, could not be continued owing to the shortage of properly qualified officers.

The data required for the preparation of the Provincial Malaria Forecast were collected from various sources and were checked and analysed. As usual, both the annual preliminary and final malaria forecasts were issued on August 31st and September 15th, respectively.

Other work undertaken in the Bureau in connection with malaria comprised the analysis of the data obtained as the result of the provincial spleen census of school children taken in June and November. The mean spleen rate of districts as determined in these months is shown in chart IV. At the census in June, 83,050 scholars attending 771 schools were examined, whilst 78,893 children belonging to 748 schools were examined at the census taken in November. The results of the bi-annual spleen census since the inauguration of the scheme in 1914 are shown in chart III.

The investigation of cerebro-spinal fever in the Borstal Institution, Lahore, which was commenced in 1932, was continued by the Epidemiologist to Government with the assistance of four Assistant Surgeons lent by the Medical Department. During the year under review, outbreaks of cerebro-spinal fever of a localized nature were also reported from the District Jails of Multan and Ambala, which were investigated and suitably dealt with by the Bureau. In addition, a small outbreak of Malta fever was reported from the Central Jail, Lahore. The Bureau undertook to conduct the necessary enquiry, examined the blood of 15 suspected cases and suggested preventive measures.

The occurrence of unusual rat mortality at Lala Musa in Gujrat district was reported in September, 1933. An officer from the Bureau was detailed for the investigation and the 5 dead rats found were subjected to bacteriological examination. Autopsy showed that they had all died from plague.



The anti-hookworm campaign in Tehsil Shakargarh, District Gurdaspur (which comprised both preventive and curative measures) was carried on with vigour during the year by the Epidemiologist to Government in co-operation with the Medical Department. Altogether 11,109 stools were examined, out of which 9,013 were found positive for hookworm ova. The total number of villages dealt with during the year was 46 and no less than 6,068 persons were treated.

As regards experimental work, the Bureau undertook twenty-six experiments on three sets of Bhoosa Battis received from the Public Health Equipment Depot for testing their efficacy, burning capacity, &c. Routine work conducted in the Bureau comprised the bacteriological examination of 21,546 specimens, whilst the Bureau also opened a field bacteriological laboratory at Thanesar in connection with the Sun Eclipse Fair. As regards work of an educational nature, a number of charts, graphs and photographs dealing with health subjects were prepared and every facility was provided in the organisation of the All-India Empire Exhibition held at Lahore in December 1933.

Dr. R. B. Lal, D.P.H., held charge of the post of Epidemiologist to Government throughout the year except for the period from June 15th to July 31st, 1933, when Dr. M. Yacob, D.P.H., Assistant Epidemiologist, officiated for him during his absence on leave. The Bureau is still accommodated in the King-Edward Medical College like last year and requires more room in order to accommodate the officers deputed on Hookworm and Cerebrospinal fever enquiries.

**50. Maternity and Child Welfare.**—Considerable progress was made in Maternity and Child Welfare work during the year under review.

There were 42 Health Centres in the Province at the commencement of the year, *viz.*, January 1st, 1933, as compared with 38 during the previous year on the same date. In the course of the year the number of Health Centres rose up to 52, *i.e.*, an increase of ten. The Health Centres at Jandiala, Dijkot Montgomery and Dinga were transferred to Bandala, Jaranwala, Okara and Lalamusa, respectively. Of the 10 new centres one was opened each at Amritsar and Ludhiana in addition to the 2 already in existence, one at Rohtak in addition to the one already in existence and one each at Kairon in Amritsar district, Kasur, Samrala (in Ludhiana district), Phalia, Sonapat, Wazirabad and Khemkaran (in Lahore district). Out of the 52 centres 35 are located in rural areas.

The Inspectress of Health Centres made 47 visits of inspection to these centres as compared with 46 in the previous year and her inspection reports bore witness to the efficient manner in which the work at almost all the centres was being conducted. The work at these centres is organized on the same lines as at the Punjab Health School Centre. It may be mentioned that 11,264 expectant mothers visited the centres for advice; 736 abortions and still births came under the notice of the Health Visitors and medical aid was called for in 343 cases.

Considerable progress was made in the important work of training the indigenous dais. The number of dais under training was 1,779 as compared with 1,405 in the previous year. Out of these 575 obtained the Indigenous Dais certificate of the Punjab Central Midwives Board and the remaining were under training. The number of confinement cases conducted by the above mentioned dais was 14,222, out of which 5,009 were personally supervised by the Lady Health Visitors. As in the previous year, the Punjab Provincial Branch of the Indian Red Cross Society extended its helping hand and very generously sanctioned a sum of Rs. 16,854 for distribution among the Health Centres in the Province and for the training of village dais. This grant proved a great boon, and without it, it would not have been possible to achieve such a great success. The thanks of every worker engaged in this task are due to the Provincial Red Cross Society. A sum of Rs. 15,000 was also distributed as grant-in-aid to the various centres by the Punjab Government. The entire body of the Medical Officers of Health in the various districts and towns of the province helped in the opening of the new centres and in the maintenance of the continuity and efficiency of the old ones.

The Punjab Health School continued its valuable work of training Health Visitors. On the completion of the training term on June 10th, 1933, all the 8 stipendiaries achieved success in the final examination and obtained the Health Visitors' Diploma. All of them were provided with appointments. Among



those who qualified, two were Red Cross Midwifery stipendiaries of Session 1931-32, one of whom is working under the Municipal Committee, Amritsar and the other one in Gujrat district. It may be considered as a very encouraging sign that the demand for the services of Lady Health Visitors is on the increase which means that the public is realizing more and more this urgent need of the country.

At the autumn session, which commenced in October, 11 candidates were selected. Out of these one failed to join, thus leaving 10, i.e., 3 Muhammadans, 3 Hindus, 3 Christians and one Sikh. Of these 10 students, 3 were private candidates and 7 stipendiaries. The prescribed term of the course was extended last year from 6 to 8 months. Even this increase proved inadequate to meet the developing needs of training required for the purpose. The sanction of the Punjab Government was, therefore, obtained to extend the training term to 9 months. The Rural Health Centre at Baghbanpura established last year for practical training of the students of the Health Visitors class continued to perform its functions satisfactorily under the charge of a qualified Lady Health Visitor. This centre is solely run from the Red Cross Funds for which thanks are due to the Provincial Red Cross Society.

In September 1933, Mrs. D. Mitra, M.A., Principal, Punjab Health School, was sent on deputation on a Red Cross Scholarship for the International course in Public Health for Nurses at the Bedford College for Women, London and Miss Ismat Maula Bakhsh was promoted from Superintendentship to Principalship of the school and Miss Lall, Assistant Superintendent, to Superintendentship.

Much credit is due to Mrs. D. Mitra, M.A., and Miss Ismat Maula Bakhsh for the able and efficient manner in which both these ladies carried out their duties during the year under report.

**51. Public Health Chemical Laboratory.**—The work conducted in this Laboratory during the year under report, which remained in the charge of Mr. Brij Lal Khuller, M.Sc., A.I.C., showed a marked increase due to a large number of samples being analysed at Kurukshetra at the time of the last Sun Eclipse Fair. The total number of samples submitted for chemical analysis was 2,231 as compared with 532 in the previous year. The 2,231 analyses included 1,940 of milk, 129 of ghee, 12 of sago, 15 of other foods, 81 of water, 6 of sewage effluents, 8 of quinine sulphate, 5 of disinfectants and 35 of miscellaneous articles.

The number of samples forwarded by the District and Municipal Medical Officers of Health showed a decrease, being 44 as compared with 104 in the case of the District Medical Officers of Health and 73 as compared with 203 in the case of the Municipal Medical Officers of Health in the previous year. Of the 1,940 samples of milk and 129 of ghee, 1,904 and 77, respectively, were examined during the last Sun Eclipse Fair at Kurukshetra. The result of the analysis of milk carried out at Kurukshetra showed that the percentage of adulterated samples decreased suddenly from 65 to 22 after the first day's examination and then gradually to 3.5 on the last day. On the other hand, only 7 out of 77 samples of ghee or 9 per cent. were found adulterated. Out of 36 samples of milk and 50 samples of ghee received from the Medical Officers of Health and the local bodies, 23 or 64 per cent. and 23 or 46 per cent., respectively, were found to be adulterated. Of 81 samples of water (major portion, i.e., 57 per cent. being from the Public Health Engineering Circle) 24 were declared to be unfit for human consumption on account of their excessive hardness, salinity or contamination. In the case of quinine sulphate, it is a matter of satisfaction to note that, unlike previous years, all samples issued by the Jail Department were found to contain the declared amount of the alkaloid. Moreover, no adulterations in Atta and Gur were detected.

Apart from the routine work, the standards of purity for sago were worked out in the Chemical Laboratory for notification under the Punjab Pure Food Act, 1929.

As suggested by the Royal Commission on Labour in India, to regulate the sale of condensed skimmed milk standards of purity were worked out with a view to provide a clause in the Punjab Pure Food Act, 1929.

The Chemist also prepared 1,757 gallons of chlorine solution in the year under report, for supply to the Central Jail and Borstal Institution, Lahore, for use in connection with the outbreak of Cerebro-spinal Meningitis among the prisoners.



It is gratifying to note that as a result of permitting the Public Health Chemist to act as Public Analyst for the municipalities which are unable to have their own qualified analysts, nine local bodies got the Act extended to their respective areas. But none of these local bodies, with the exception of one, sent any samples for purposes of examination.

Great credit is due to Mr. Khuller, Chemist, Public Health Department, for the valuable work done especially in connection with the last Sun Eclipse Fair at Thanesar.

**52. Public Health Equipment Depot.**—The value of stores in hand on 1st January 1933, amounted to Rs. 5,275-1-8 as compared with Rs. 7,753-1-8 on the same date of the preceding year. The cost of stores purchased during the year under report was Rs. 10,798-5-1 as compared with Rs. 10,801-13-3 in the year 1932. Thus stocks of an aggregate value of Rs. 16,073-6-9 were available for sale during the year under report. The cost price of the articles sold during the year amounted to Rs. 11,770-14-6 and their sale price, after adding Depot charges was Rs. 13,559-14-6. There was thus a gross profit of Rs. 1,789 during the year as compared with Rs. 1,958-5-11 in the preceding year. In addition to the articles sold to local bodies, the Depot issued free of cost certain camp and inoculation equipment and also 131,736 doses of anti-plague vaccine, 72,996 c.cs. of anti-cholera vaccine and 497 lbs. and 8 ozs. of quinine tablets, the corresponding figures for the previous year being 85,632 doses of anti-plague vaccine, 28,465 c.cs. of anti-cholera vaccine and 47 lbs. of quinine.

The maintenance charges of the Depot amounted to Rs. 5,596-3-0 as compared with Rs. 5,314-15-9 in the previous year. The Depot is run at a loss due to small sales. The deficit was Rs. 3,807-3-0 as against Rs. 3,359-11-10 in 1932. As the Depot constitutes an essential part of the defence scheme for combating epidemics, this loss, however, is negligible.

The post of the Superintendent was held throughout the year by Sub-Assistant Surgeon Dr. Sayyed Mushtaq Ali.

**53. Education Bureau and Health Propaganda.**—Intensive propaganda in health matters was continued throughout the year. Propaganda by means of lantern lectures, mainly given to school children and at fairs, forms an important part of the routine duties of District Medical Officers of Health. During the year under review, these officers with the help of their staff gave 6,934 lectures with or without magic lantern on subjects of public health interest. Much valuable work amongst women was performed by the Principal, Punjab Health School and Inspectress, Health Centres, Punjab, during the course of her tours.

The chief and notable feature of the year in respect of propaganda was the success achieved, largely owing to its novelty, by the public health section of the Indian Empire Exhibition, Lahore. The section was under the able direction of Rai Sahib Dr. Harnath Singh, D.P.H. Commencing from 21st December 1933, it remained open for more than a month and it is estimated that approximately 5 lakh persons saw the exhibits. The design and arrangement of the exhibits were different to the traditional shows in so far that it formed a compendium of health knowledge, explained and illustrated in a manner as to be easily understood and assimilated both by the illiterate as well as the literate. The exhibits gave an ocular demonstration of the wonders of the human body and brought home to the visitor his responsibility for preserving this treasure, while they depicted the struggle for existence and victory of science over disease in such a way as to be of practical use to students of hygiene in safeguarding their own as well as public health. The Health Exhibition also fulfilled such needs of the student community and intelligentsia in relation to hygiene education as were beyond the means of the ordinary educational institutions, by giving graphic illustration and food for thought on various health topics and even on relations which exist between health, economy, education, work, habits, &c., &c.

The charges debitable to the Public Health Department on account of this exhibition amounted approximately to Rs. 5,500 and it may well be that amongst the many thousands who visited the Exhibition, there were a good many who derived benefit as well as pleasure.

A most instructive piece of health propaganda was also carried out in the year under review at Thanesar during the course of the last Sun Eclipse Fair.



The Photographer attached to the Education Bureau prepared for departmental use 213 new photographs, 327 photographic prints, 63 enlargements and 249 lantern slides during the year under report. The Photographer also paid visits to Kurukshetra, Dilawar (Gujranwala district), Nankana Sahib and Ludhiana in connection with the taking of photographs and showing the health films.

The Department is indebted to the Education Staff, Co-operative Department and the Rural Community Councils of the various districts as well as to the Red Cross Societies for their willing co-operation in the work connected with health propaganda.

**54. Inspections.**—Owing to his onerous and multifarious duties as a member of the Legislative Council, Secretary of the Sanitary Board and member of various other Boards and Committees, it is only rarely possible for the Director of Public Health to be away from the headquarters to carry out long sanitary inspections; the duty of carrying out the routine inspections of towns has, in consequence, been assigned to Assistant Directors. Tours of the Director of Public Health are, therefore, undertaken in connection with the more important public health matters, such as attending All-India or other public health conferences and visiting the localities which are badly infected with plague, cholera, malaria and other epidemic diseases.

The Assistant Directors conducted tours to supervise the work of the District Medical Officers of Health of their respective circles, more especially in connection with the suppression of epidemics, vaccination and the registration of births and deaths. They also carried out routine sanitary inspections of 79 towns and 567 villages as compared with 69 towns and 117 villages inspected last year. In their capacity as Additional Inspectors of Factories, 13 factories were inspected.

District Medical Officers of Health carried out routine inspections of 221 towns and 5,747 villages as against 182 towns and 5,549 villages inspected last year.

**55. Conclusion.**—The year under report was one of unusual activity for the Public Health Department. While in the beginning of the year our endeavours were mainly directed towards the control of small-pox and in a vigorous campaign to push on vaccination, later in the year the Solar Eclipse Fair at Thanesar and Flood Relief measures in south-east Punjab occupied considerable time and attention. Cholera and plague were kept well under control and activities of the Department were extended to solve such pressing problems as Hookworm, Trachoma and Leprosy in which connection the work done exhibited a steady development. The efforts organised in connection with the improvement of rural sanitation recorded satisfactory and promising progress.

In spite of the epidemic of malaria, the year was comparatively a very healthy one with a record number of births ever registered in the Province in any year. The sustained endeavours made to grapple with the growing number of health problems both in scientific research and in general field work met with exceptionally good results.

The officers of the Department were put to a very severe strain and I take this opportunity to thank them all for the excellent success which their strenuous efforts achieved.

With their number reduced to three, all the Assistant Directors had a very busy time and their output of work together with their keenness in the discharge of duties was highly commendable. The total sanctioned strength of 5 Assistant Directors was reduced to 4 in 1931 due to financial stringency, but since Colonel Gill, I.M.S., left the Province in July 1932, one more post has been kept in abeyance. It is hoped that with the growing development of the functions of the Department it will soon be necessary for the Government in the interest of efficiency of work to appoint the 4th Assistant Director and thus relieve the existing officers of the extra continuous strain which they have borne with admirable fortitude.



Amongst the District Officers, I would like to mention the names of Drs. Mathur and Kaushash in connection with Flood Relief measures, of Rai Sahib Dr. Harnath Singh, Dr. Balmokand and Dr. Riaz Ali Shah for general District work and of Drs. Vohra, Sahgal and Sethi for work done in the suppression of plague.

Tact and judgment was exhibited in Public Health administration under Municipalities by Dr. Tiwari of Jullundur, Dr. Malhotra of Rawalpindi and Dr. Jhingan of Lyallpur.

The services rendered by officers in connection with the Solar Eclipse Fair are mentioned in a separate report submitted to the Government.

SIMLA, E. :

Dated the 11th September 1934.

K. A. RAHMAN,

Director of Public Health, Punjab.



## APPENDIX I.

### ANNUAL REPORT OF THE SUPERINTENDING ENGINEER, PUBLIC HEALTH CIRCLE, PUNJAB, FOR THE YEAR 1933.

1. *Administration.*—Mr. D. A. Howell, M.Inst. C.E., M.I.Mech.E., held the post of Superintending Engineer, Public Health, up to the 20th April, when he proceeded on 8 months' leave, handing over charge to Mr. J. A. R. Bromage, M. Inst. C.E., who officiated as Superintending Engineer up to the 22nd December when Mr. D. A. Howell returned to duty.

Lala Guranditta Mal Khosla, Assistant Engineer, was Personal Assistant from 1st April to 4th July when he proceeded on leave and handed over charge to Lala Devi Chand, Senior Overseer, who officiated as Personal Assistant till 4th November when Lala Guranditta Mal Khosla returned to duty. Lala Guranditta Mal Khosla held the post till the end of the year.

2. *Executive Offices.*—There was one Division, the Lahore Public Health Division, and four Sub-Divisions under the Circle throughout the year.

Mr. J. A. R. Bromage, M. Inst. C.E., was Executive Engineer of the Division up to the 20th April when, on becoming officiating Superintending Engineer, he handed over charge to Mr. J. Vesugar, I.S.E., B.Sc., A.M. Inst. C.E., who held charge of the Division till the close of the year.

The four Sub-Divisions remained in charge of the following officers throughout the year :—

1st Lahore Public Health Sub-Division	.. Mr. D. C. Khanna, Assistant Executive Engineer.
2nd Lahore Public Health Sub-Division	.. Mr. J. S. Sethi, A. M. Inst. C.E., Assistant Engineer.
Montgomery Public Health Sub-Division	.. S. Hukam Singh, B.Sc., Assistant Engineer.
Bhiwani Public Health Sub-Division	.. Lala Nand Lal, Sub-Engineer.

3. *Progress of Sanitary engineering in the Province.*—Before proceeding to review the work of the Circle for the past year, it will be of interest to note that the post of Sanitary Engineer to Government, Punjab, was created 34 years ago, in order to afford the best advice and assistance to local bodies of the Punjab to carry out successfully, sanitary schemes such as water and sewerage projects.

At that time there were only about 4 municipal waterworks schemes of any importance, viz., Simla, Ambala, Lahore and Delhi; and a few odd town surface drainage systems, in the Province, and the total cost of all sanitary works in existence probably did not exceed forty-five or fifty lakhs of rupees while the total horse power of pumping plants was not more than about 650.

From 1900 to 1920, water-supply schemes and extensions were carried out in 16 towns at a cost of about forty lakhs of rupees, while drainage works and extensions were constructed in 27 towns at a cost of about twenty-six lakhs. During this period a few important sanitary works of modern design were constructed for Government institutions. These included Ellerslie and Barnes Court, Simla, Government House and Mayo Hospital with King-Edward Medical College, Lahore. The total value of completed sanitary works throughout the Province in 1920 stood at about one-hundred and twenty-five lakhs and the horse power of mechanical plants in connection therewith was about 2,250.

In 1921, the Sanitary Engineer to Government whose duties hitherto were mainly advisory and consultative, undertook the construction of important sanitary schemes, in addition to their design. The period 1921 to date and more particularly the last 10 years has been one of very considerable activity in public health engineering throughout the Province. A large number of municipal waterworks and drainage undertakings have been carried out and in addition, Government itself has also made considerable advancement in the provision of improved water-supply systems and sanitary installations for its institutions such as hospitals, jails, schools and colleges, courts, &c., and particularly those situated in the capital. A number of water-supply schemes have been carried out also in connection with rural areas and important fair areas.

It is estimated that since 1921, municipal water-supply and drainage works aggregating Rs. 180 lakhs have been built, while important Government public health works costing over Rs. 40 lakhs have been instituted.

Thus the total value of public health engineering works completed or in course of construction up to the end of 1933 in the Province was upwards of Rs. 350 lakhs. This is nearly three times the value of such works completed up till 1920.

Mechanical plants for local bodies involving a horse power of about 4,600, and for Government works involving about 1,000 horse power have been installed since 1920. This



total of 5,600 horse power is nine times that in existence in 1900 and over  $3\frac{1}{2}$  times that installed during the 20 years from 1900 to 1929. Mechanical plants of a total horse power of upwards of 8,000 have been installed or are in course of installation up-to-date for sanitary works throughout the Province. This is about  $12\frac{1}{2}$  times as great as the plants in existence in 1900.

The financial stringency of the past 4 years, however, has slowed down progress somewhat, more especially owing to the reduction of grants-in-aid for sanitary works, made available by Government. In spite, however, of financial stringency the pressure for sanitary improvements by local bodies is not abated and several important schemes have been put under construction only recently while others are likely to be started in the near future.

Up-to-date there are 34 towns in the Province with an aggregate population of over 1,400,000, in which protected water-supply schemes have been constructed or are under construction at present while in addition 4 water-supply schemes for important fair areas and 4 water-supply schemes for Rural areas have been carried out.

There are very many towns in which surface drainage arrangements have been provided. Many of these, however, are of a rudimentary character, others are in a state of bad repair and require thorough overhaul and partial re-construction.

Thirty years ago, the only sanitary engineering works consisted of a few comparatively simple water-supply and surface drainage schemes which did not involve much, if any, specialized engineering knowledge and skill.

In these modern days, however, drainage problems have become much more complicated owing to the introduction of sanitary installations on the water carriage system while water-supply problems now involve modern methods of dealing with pollution, such as chlorination, mechanical and rapid filtration; the application of mechanical and electrical pumping appliances of various types, tube-wells, universal metering, automatic control over pumping plants, &c.

Other varied activities of the Circle comprise fire protection appliances, central heating by steam and hot water and refrigerative and evaporative cooling of buildings, air conditioning, steam disinfection installations and sterilization apparatus, sewage treatment and purification, slaughter-houses, markets, new colony towns and a hundred and one other items contingent or incidental to the modern developments of sanitary science specially applied to suit the requirements of the Province.

The name of the Sanitary Engineer to Government, Punjab, was changed to that of Superintending Engineer, Public Health Circle, in 1928.

4. *Borings.*—17-No. borings for water were in hand during the year.

5. *Activities of the Public Health Circle.*—The activities of the Public Health Circle comprise the following classes of work :—

- I. Execution of public health works for Government buildings and institutions.
- II. Execution of public health works on behalf of local bodies such as municipal committees, small town committees, notified area committees and district boards, &c.
- III. Maintenance and operation of public health works in connection with Government buildings and institutions and management of Government residential estates at Lahore.
- IV. Maintenance and operation of public health works of local bodies.
- V. Preparation of projects for public health works for Government institutions, &c.
- VI. Preparation of projects for public health works for local bodies, &c.
- VII. Inspection of water-supply works and other sanitary works of local bodies.

The work done is briefly described as under :—

#### I.—EXECUTION OF PUBLIC HEALTH WORKS FOR GOVERNMENT BUILDINGS AND INSTITUTIONS.

(1) *Complete steam supply, sanitary and air conditioning plant for block C-Lady Willingdon Hospital, Lahore, estimated cost Rs. 1,06,414.*—This includes a modern high pressure oil fired steam boiler plant in duplicate with a refrigerative air conditioning installation for Block C of the hospital. It is the first of its kind in northern India. The plant was completed and put into operation in March 1933 and is giving satisfactory service.

(2) *Water borne system of sewerage, etc., for Civil Secretariat and adjoining offices, Lahore, estimated cost Rs. 23,023.*—This is a drainage scheme on the water carriage system to drain the Civil Secretariat into the Shish Mahal sewerage system, Lahore. All the sewers have been laid and incinerators and latrines built. It has been decided for the time being to omit provision of fittings on the water carriage system in the new latrines and in the existing lavatories for clerks, which items were provided in the estimate.



It is a pity that owing to financial stringency the complete scheme has not been carried out and postponement of provision of water carriage sanitary fittings will mean that the full benefits of the sewerage system will not be realized.

(3) *Borstal Jail, Lahore, water-supply extensions*—Providing additional tube-well, estimated cost Rs. 14,488.—This is a new tube-well to replace the old tube-wells, the yield from which has decreased. The work has been completed. Automatic electrically operated pumping sets have been provided thus practically eliminating the human factor in working.

The switches to stop and start the plant are operated by the level of water in the distribution reservoir, thus ensuring a continuous water-supply night and day. An excellent yield of water is given by the new well and as a result of the high efficiency of the plant the cost of operation per 1,000 gallons of the new supply is less than that of the original installation.

(4) *Extramural drainage and sullage disposal of Central, Borstal and Female Jails, Lahore, estimated cost Rs. 83,565.*—This scheme which includes surface drainage works with automatic pumping stations, to pump the sullage from the Female Jail, Central Jail and Borstal Institution, Lahore, to sewage farms at the jail gardens, has been successfully completed and is working satisfactorily.

(5) *Water-supply and drainage of additions to the City Kotwali, Lahore, to provide better accommodation for troops, &c., estimated cost Rs. 15,632.*—This work which includes a new tube-well with reservoir and distribution system to render the Kotwali and accommodation for troops nearby, independent of the municipal supply, has only just been commenced.

(6) *Water-supply, sewerage and sanitary fittings to Normal School for Women and Lady MacLagan Girls School, Lahore, estimated cost Rs. 40,411.*—This scheme consists of a tube-well with reservoir and distribution system and also improvements to sanitary and drainage arrangements and sewage pumping station to discharge the waste water and sewage into the municipal drainage system. The water supply system has been completed and is working satisfactorily. Sewers have been laid within the premises and the septic tank and sewage pumping station are under construction, and are expected to be completed in 1934. Certain sanitary conveniences have been completed.

(7) *Sanitary installation at Dental Hospital, Lahore, estimated cost Rs. 14,455.*—This work consisting of a sanitary system with sanitary fittings is practically completed and is working satisfactorily. A few fittings which cannot be installed until certain furniture is provided by the Medical Department, have still to be put in.

(8) *Laboratory equipment including internal drainage and sinks, etc., in Dental Hospital, Lahore, estimated cost Rs. 10,588.*—This work is practically completed and is working satisfactorily. A few fittings which cannot be installed until certain furniture is provided by the Medical Department, have still to be put in.

(9) *Sewerage Scheme, MacLagan Engineering College, Moghalpura, estimated cost Rs. 86,516.*—This scheme consists of a complete sewerage system for the college and residential quarters, with an electrically driven pumping station and "Simplex" agitated sludge purification plant. This work has been completed and is working satisfactorily. The effluent is of a standard of purity approved by the Department of Public Health, Punjab, and the nuisance which previously prevailed at this college has been abated.

(10) *Providing a tube-well and water-supply for Fort Terraces Old Fort, Lahore, estimated cost Rs. 12,905.*—This consists of a tube-well with electrically driven pumping plant and rising main to supply water for the grass plots and fountains of the Old Fort terraces.

The work has been finally completed and the installation is giving satisfactory service.

(11) *Thanesar Sun Eclipse Fair Water-supply, District Karnal.*—A number of estimates for certain additional works and operation of the water-supply and sanitary equipment for the fair held in August as detailed below were sanctioned and works under them were carried out and completed before the Fair :—

	Rs.
(a) Reconditioning of water-supply and sanitary equipment and its operation for the Sun Eclipse Fair, 1933, estimated cost .. .. .	25,883
(b) Additional tube-well, pumping chamber and pumping plant—estimated cost .. .. .	12,519
(c) Sinking a new tube-well close to old well No. 1, estimated cost .. .. .	5,286
(d) Providing 11 shelters for combustible material and sweepers on duty, estimated cost .. .. .	3,080
(e) Additional sanitary conveniences, estimated cost .. .. .	5,324
(f) Supplying a spare pumping plant, estimated cost .. .. .	2,250
(g) Providing one set of pumping plant, estimated cost .. .. .	2,250
<b>Total</b> .. .. .	<b>56,592</b>



(12) *Installing duplicate pumping plant at Lawrence College, Ghoragalli, estimated cost Rs. 13,200.*—This scheme covers the provision of a new 18 H. P. oil engine with three throw ram pump for the Lawrence College independent water-supply together with improvements to staff quarters, &c. The engine has been ordered and delivered and the pump is on order. It is anticipated that the installation will be completed by July 1934.

(13) *Council Chamber and Civil Secretariat, Lahore, Water-supply, new tube-well.*—A new tube-well, estimated cost Rs. 6,403 has been put down to replace the tube-well constructed in 1920, the yield of which was failing. The new tube-well has been harnessed to the existing pumping plant and has proved satisfactory, its yield being 5,820 gallons per hour with a depression head of 2.1 feet.

(14) *Queen Mary College, Lahore, Water-supply, New Tube-well.*—A new tube-well, estimated cost Rs. 9,883 with pumping plant is being constructed in connection with the independent supply of water for the above institution as the water-supply is short owing to failing yield of the existing old tube-well which was put down about 14 years ago. It is anticipated that the work will be completed in 1934.

(15) *Campbellpore Jail Water-supply.*—The existing water-supply of this jail is based on a deep percolation well situated near the jail. The pumping station and pumping plant have been renovated and a duplicate pumping plant has been installed while improvements to the general water-supply system have been carried out at a cost of Rs. 9,779.

(16) *Government institutions in Lahore not provided with independent water-supplies.*—It is worthy of note that every important Government institution in Lahore with the exception of the Vaccine Institute, the Katcheri with Police Superintendent's Office and the Rivaz Gardens Estate have now been provided with independent water-supply systems of ample capacity. The Vaccine Institute, Katcheri, and Rivaz Gardens Estate are still dependent upon the municipal supply which is unreliable, and estimates have been submitted for independent water-supply schemes at a comparatively low cost. The Vaccine Institute, in particular, is in urgent need of a first class supply of good pure wholesome water. The cost of a small skeleton scheme for this institution is Rs. 7,365 and it has been strongly recommended that the work should be carried out soon.

The cost of supplying water to the Rivaz Gardens Estate where there is a severe shortage of water from the municipal supply, from a Government tube-well closeby will only be about Rs. 11,318. This work is also of an urgent character.

## II.—EXECUTION OF PUBLIC HEALTH WORKS ON BEHALF OF LOCAL BODIES.

(1) *Nankana Sahib Drainage, estimated cost Rs. 58,380.*—This is a skeleton surface drainage scheme for the town and mandi, with outfall, sullage and disposal works and pumping station.

The drains and the building work at the disposal works have been completed. The pumping plant has been placed on order and is expected shortly. A tube-well is being sunk to provide water for drain flushing. It is anticipated this scheme will be finally completed early in 1934.

(2) *Sheikhupura old town drainage, estimated cost Rs. 41,224.*—This is a scheme of surface drains and pavements for the old town. The drainage work as provided for in the estimate is practically completed. Construction of road work is in hand.

(3) *Shahzada Nangal and Kotli drainage at Gurdaspur, estimated cost Rs. 12,670.*—This is a scheme for skeleton surface drains for a suburb of Gurdaspur. The contract has been given out and work will be started early in 1934.

(4) *Murree Waterworks extensions, reservoir, etc., at Dunga Galli, estimated cost Rs. 5,25,236.*—The reservoir and extension works at Dunga Galli functioned satisfactorily during the past summer.

(5) *Hafizabad and Garhi Awan drainage and dewatering of ponds, estimated cost Rs. 1,19,502.*—This is a scheme for surface drainage for Hafizabad and Garhi Awan and two separate outfalls and disposal works, one for each area to be provided. The estimate also includes the provision of certain storm water drains.

The intramural work is mostly completed. The land required for the disposal works and outfalls has not been acquired owing to delay on the part of the local body. The matter has been reported to the Deputy Commissioner and as soon as possession of the land is obtained the scheme will be completed.

(6) *Trial borings in 8 villages in Attock District, rural water-supply, estimated cost Rs. 18,181.*—Only two trial bores were made through the agency of the Agricultural Department at a cost of Rs. 17,143. No water was met in either case. The balance of the money is proposed to be utilized for sinking a percolation well in village Khunda.

(7) *Choa and Katas fair water-supply improvements, Jhelum District, estimated cost Rs. 31,232.*—This work, which comprised the construction of a second filter and many other miscellaneous improvements was completed before the fair held in April. The scheme functioned satisfactorily.



(8) *Thal Ilacqua water-supply scheme, extensions to Lilla, Dhudi and Jethal, estimated cost Rs. 53,042.*—This scheme consists of extensions to the Thal Ilacqua rural water supply, Jhelum District, which was carried out in 1927 at a cost of Rs. 1,48,043. At present water is taken from the Sardi spring in the Salt range and is piped across the salt bearing rocks forming the southern escarpment of the Salt range near Pir Khara, terminating in a reservoir about 3 miles north of Lilla. The scheme is useless without a distribution system to deliver water to the neighbouring villages of Lilla, Dhudi and Jethal. Only part funds for the extensions were allotted during the year and it was considered inadvisable, therefore, to proceed with the extensions, until funds amounting to Rs. 29,000 approximately to cover the Lilla extension or the full estimated cost to cover the complete scheme, are allotted.

(9) *Tamman water-supply (Campbellpore District), estimated cost Rs. 78,894.*—This rural water-supply scheme which was completed in 1932, entirely out of Government grant-in-aid, has not been started up so far due to the failure of the Campbellpur District Board to provide necessary funds for operation. The District Board has been pressed on several occasions to arrange for the maintenance funds but without avail and thus a beneficent scheme on which Government has spent Rs. 79,000 is lying derelict and serving no useful purpose.

(10) *Montgomery Drainage Scheme, Rs. 5,97,290.*—This is a comprehensive sullage and storm water drainage scheme for the town of Montgomery.

Work was commenced in April 1933 on the disposal works, pumping station, outfall drain, and a part of the intercepting drainage system. The contractor has made slow progress. Tenders have been called recently for part II of the scheme and work is about to commence.

(11) *Kamalia Mandi Drainage, etc., estimated cost Rs. 15,212.*—This is a simple surface drainage scheme for Kamalia Mandi. Work has been started on construction of drains and on the wells required for drain flushing and for drinking water.

The outfall drain and disposal works have not been taken in hand so far as the land required for these works has not been acquired.

(12) *Re-conditioning of Isakhel Waterworks, estimated cost Rs. 13,984.*—The scheme for re-conditioning provides for a new well and a floating pumping station carried on a steel pontoon. Since the sanction of the estimate, however, the North-Western Railway has made a successful tube-well within some miles of the site of the proposed well and it is now proposed to try to obtain water by sinking a deep trial bore. If this is not successful the proposals in the sanctioned estimate will be reverted to.

(13) *Sialkot Drainage Scheme, Rs. 4,49,881.*—This estimate covers the provision of main extramural and outfall drains and disposal works together with skeleton intramural drains and repairs to odd intramural drains and pavements in the municipal area.

The extramural and outfall drains and disposal works were completed in 1928 and after maintenance and operation by the Public Health Circle for a few years, were handed over to the local body for operation and maintenance in 1931.

One section of the southern intercepting drain near the Imam Shah was left incomplete owing to a dispute over the alignment passing a Muhammadan cemetery. This dispute was settled finally in 1933 through the offices of the Deputy Commissioner and the construction of the gap in the drain has been taken in hand.

The intramural drainage works were nearly finished in 1933 except for utilization of the savings on the works. During 1933, intramural drains and pavements were completed in the Charaghpora area and also a few drains were constructed at other places out of savings as required by the local body and now the scheme is practically finished.

The intramural drains were made over to the local body immediately after completion.

(14) *Multan Water Supply Scheme, estimated cost Rs. 10,34,706, additional (fifth) tube-well.*—Three out of the four tube-wells put down in connection with the scheme in 1924-25 have shown an alarming decrease in yield and consequently a fifth tube-well has been put down out of savings on the original water supply project. The pump house is under construction and when ready, one of the electrically driven pumping sets from one of the original tube-wells the yield of which has decreased the most, will be shifted across and fitted on the new well. An estimate for a 6th tube-well to replace another of the original tube-wells, has been prepared and submitted to the Municipal Committee for provision of funds but no further news has been received so far.

(15) *Bhiwani Drainage Scheme, estimated cost Rs. 4,44,403.*—This is a comprehensive drainage scheme for Bhiwani, District Hissar. The scheme provides for a complete system of intramural drains with two outfall and disposal works and pumping stations. Arrangements for land acquisition have been commenced and it is anticipated that the first tenders for the works will be called early in 1934.

(16) *Multan Drainage Scheme, Part I and Part II, estimated cost Rs. 1,22,976 and Rs. 1,34,757 respectively.*—This scheme comprises two separate sewer outfalls with disposal works and electrically operated pumping plants in two pumping stations to lift the sullage on to disposal lands.



Both parts have been completed in all respects for the past 3 years except that the construction of the outfalls with the collecting chambers have not been made, as this is not possible until arrangements are made to run the pumping plants to lift sullage from the collecting chambers. The difficulty about running these plants is that the Municipal Committee, Multan, has a dispute with the local Electric Supply Company over rates for electric current and until this is settled the schemes cannot be finally completed and brought into beneficial use.

(17) *Duplicate set of pumping plant at Dera Ghazi Khan Water-works, estimated cost Rs. 29,790.*—This estimate covers the cost of a second oil engine driven deep well pumping plant at the new headworks. The plant has been installed and connected up to the tube-well and the percolation wells and is functioning satisfactorily.

(18) *Bhiwani Water-Supply, estimated cost Rs. 5,90,267.*—This is a comprehensive water supply scheme for the town of Bhiwani, District Hissar. These works were finally completed this year and were opened by His Excellency the Governor of the Punjab in August. Water has been supplied to the town from that date.

(19) *Ludhiana Drainage Scheme, estimated cost Rs. 3,45,009.*—This is a comprehensive scheme of surface drainage extensions for Ludhiana.

The works included in the sanctioned estimate have been completed since 1932 and certain extensions of the drainage system were proposed to be carried out, chargeable to the savings. The estimates for most of these additional works have now been approved by the Sanitary Board, and tenders have been called for the additional works which are to be put in hand in 1934.

(20) *Karnal Drainage Scheme, estimated cost Rs. 1,46,851.*—This surface drainage scheme has been finally completed in all respects and handed over to the Karnal Municipal Committee.

The Municipal Committee have recently applied for carrying out certain extra works out of savings and the proposals have been approved by the Sanitary Board.

(21) *Ferozepore Town Drainage Extensions, estimated cost Rs. 82,574.*—This work has been completed in accordance with the sanctioned project. A portion of the storm channel near the Multani gate which was to be left katcha according to the sanctioned scheme is being provided with brick side pitching at the request of the Municipal Committee, after which the work will be finally handed over to the Committee.

(22) *Jagraon Mandi Drainage Scheme, estimated cost Rs. 80,251.*—This scheme has been completed as laid down in the sanctioned project. It is proposed, however, to provide drains along the Railway Road out of savings on the scheme. An estimate for this additional work has been submitted and the proposals have been approved by the Sanitary Board, Punjab.

(23) *Water-Supply at Suketri in the Ambala District, estimated cost Rs. 4,509.*—This is a Rural Scheme, providing for a percolation well for the village water supply. The work is in progress.

(24) *Repainting the steel reservoirs of Ludhiana Waterworks, estimated cost Rs. 1,547.*—The two steel cylindrical reservoirs of the Ludhiana water supply scheme were found to be in need of cleaning and painting last year. The work has now been placed in hand.

(25) *Proposed tube-well for Rangpura area, Sialkot, estimated cost Rs. 22,595.*—A tube-well has been sunk for this work through the agency of the Agricultural Department, but it did not give the required yield of water, while it has also been discovered that there is a large variation in spring level of water of various water bearing strata. A second tube-well has, therefore, been sunk and carried to a deeper level. The work is in progress.

It was originally contemplated using horizontal electrically driven pumps for this scheme but in view of the variation of spring level of water it is probable that vertical spindle pumps will have to be installed.

(26) *Reconstruction of Shishmahal Drainage Pumping Station, Lahore, estimated cost Rs. 40,411.*—This work, comprising a new pumping station with 2 vertical spindle electrically driven pumps, is in progress. The sump for holding the sullage and the pump chamber have been built with floors considerably below the natural spring level and great difficulty has been experienced in sinking and plugging the wells below water level. The wells have been plugged and joined but a certain amount of leakage has to be dealt with still. It is anticipated, however, that this work will be brought to a successful conclusion by June, 1934.

### III.—MAINTENANCE AND OPERATION OF PUBLIC HEALTH WORKS IN CONNECTION WITH GOVERNMENT BUILDINGS AND INSTITUTIONS.

Almost all public health works in connection with Government buildings and institutions throughout the province are maintained and run by this Circle. Such works comprise water supply installations consisting of tube-wells or percolation wells with steam, oil engine driven and electrically driven pumping plants, hand pumps, pipes, tanks, reservoirs, &c., sanitary installations consisting of fittings of all types, drains, sewers, sullage tanks, septic



tanks, sewage farms, &c.; heating, hot water supply and air conditioning installations; steam boilers and disinfecting plants. The complete maintenance and management of the three Government estates in Lahore described below is also vested in the Executive Engineer, Lahore Public Health Division :—

	Number of houses.
(a) G. O. R. Estate for Gazetted Officers .. ..	31
(b) Rivaz Gardens Estate for European Clerks .. ..	34
(c) Chauburji Gardens Estate for Indian Clerks .. ..	377

The maintenance work of these estates includes all repairs to buildings and roads, care and irrigation of grass plots, &c., operation of water supply and sanitary installations, conservancy arrangements, the allotment of houses on the Rivaz Gardens and Chauburji Gardens Estates and the realization and accounting of rents, water, conservancy charges, &c.

#### IV.—MAINTENANCE AND OPERATION OF PUBLIC HEALTH WORKS ON BEHALF OF LOCAL BODIES.

A number of important water supply installations such as Murree Waterworks, Bhiwani Waterworks, Nurpur fair area water supply in the Rawalpindi district, Thal Ilacqua water supply, Pind Dadan Khan town water supply, Choa and Katas fair water supply in the Jhelum district, Multan city water supply, Dera Ghazi Khan water supply, Pathankot water supply and Jawalamukhi fair water supply in the Kangra district, part of Ambala city water supply and several other smaller schemes were maintained and operated during the year by this Circle on behalf of local bodies. Statement B annexed gives further particulars concerning these installations.

#### V.—PREPARATION OF PROJECTS FOR PUBLIC HEALTH WORKS FOR GOVERNMENT BUILDINGS AND INSTITUTIONS.

The demand for projects for Government public health works has been rather low during the year owing to general financial stringency. The total value of projects prepared was as under :—

	Rs.
(1) Major Works .. ..	2,52,428
(2) Minor Works .. ..	3,60,708
(3) Maintenance and Repair Works .. ..	3,77,382
Total .. ..	9,90,518

Details of these projects are given in statement A annexed.

#### VI.—PREPARATION OF PROJECTS FOR PUBLIC HEALTH WORKS FOR LOCAL BODIES.

A considerable number of projects for major and minor works were prepared for public health works of local bodies during the year. A list of these is appended in Statement A.

In addition to the work involved in the preparation of these projects, a few schemes got out and prepared by the staff of local bodies were examined. Those found in order were technically sanctioned and others returned for further amendment in the light of technical notes recorded by the officers who examined them. The total value of these schemes scrutinized and sanctioned during the year was approximately Rs. 26,302.

#### VII.—INSPECTIONS OF WORKS OF LOCAL BODIES.

About 117 inspections of public health works in small and large towns and other places were made by the officers of this Circle during the year to give advice or make reports.

6. *Sanitary Works of Urban areas.*—Although there has been an undoubted improvement in the upkeep of municipal works in the course of the past decade, the general standard of maintenance and operation, except in the case of Simla, is still below that which should be aimed at, and considerations of efficiency and good sanitation suffer in consequence. Local bodies do not realize the truth of the adage "that a stitch in time saves nine." Repairs to brickwork and masonry are seldom carried out in a prompt and regular manner, roads and pavements are left without timely repairs and works are often allowed to get into dilapidated condition. The same chronic symptoms occur in regard to machinery but here the difference is that whereas concrete or brickwork drains and other structural work, will perhaps function somehow, though inefficiently, even if not kept in a proper state of repairs, machinery which is neglected will in due course, simply break down completely. Such cases of breakdown are too common a feature of municipal works.

The larger municipalities, except Simla, are as bad if not worse than some of the smaller local bodies, in failing to keep and maintain in efficient order the pumping machinery and structural work of their drainage and water supply schemes.



Due to the purdah system and the difficulties of obtaining immediate entry into private premises by water supply inspection staffs to examine the condition of fittings and pipes and to detect cases of waste of water, there is no effectual means of putting a stop to wastage of water through private connections except by universal metering. It is a matter of regret to note that with the exception of Simla and Murree and a few places, where new water supply works with universal metering of house connections, have been introduced comparatively recently, local bodies have not made any real effort to deal with the problem. Some of the larger municipalities such as Lahore, Amritsar, Sialkot and Rawalpindi are amongst the most backward in this respect. However the Lahore Municipal Committee has passed recently a resolution to meter all connections in the Civil lines where there are gardens. It still remains to be seen what practical effect will result.

The standard of cleanliness in regard to maintenance of drainage systems, sullage or sewage disposal works, pumping stations, &c., as generally observed in almost all towns in the plains is still low and considerable improvements are a desideratum.

Amongst matters calling for special attention are the need for prompt repair and better cleansing of drains, outfalls and disposal works, the proper removal of sludge from sewers and disposal works, the regular daily working of the pumping machinery or apparatus provided to lift the sullage on to disposal land and the upkeep of the surroundings of the sewage or sullage outfalls and disposal works in a cleaner and more sanitary condition.

Notes of matters of interest regarding sanitary works of a number of important towns are given below :—

(1) ABOHAR.—(POPULATION 14,035).

This small town is the most progressive in the Province from the point of view of sanitation, as it possesses very good water supply and drainage works.

(i) *Waterworks*.—These works were completed in 1929 at an estimated cost of Rs. 3,25,357. They are based on canal water from the Sirhind Canal as a source of supply. The water is stored in sedimentation and storage tanks of a capacity of 5,850,000 gallons, then passed through slow sand filters and pumped into an overhead service reservoir of reinforced brickwork, capacity 38,000 gallons, from which the water is distributed into the town through cast iron pipelines.

There are about 200 house connections, all of which are metered, and 40 public standposts. The designed capacity of the scheme is 150,000 gallons per diem or 12 gallons per head for an estimated population of 12,000. The average daily supply for the year 1932-33 was 96,993 gallons.

(ii) *Drainage*.—A comprehensive surface drainage scheme with pavements, estimated cost Rs. 2,45,209, was completed just before the waterworks. The sullage gravitates to sullage collecting tanks about 500 yards away from the town and is pumped on to land and utilized for irrigation of a sewage farm.

(2) AMBALA CITY.—(POPULATION 35,193).

*Waterworks*.—The distribution system is in a parlous condition. Since last year no effective improvements have been attempted by the Municipal Committee, which has rejected the advice tendered by the public health engineers for rectification of the distribution pipelines, adoption of universal metering of house connections and more equitable distribution of public standposts.

An estimate amounting to Rs. 38,282 for a second 40 feet diameter well with additional pumping plant at the Sarangpur subsidiary headworks has been prepared and Government has agreed to provide funds for its construction subject to the condition that the Municipal Committee hands over the waterworks to the Public Health Engineering Circle for maintenance and operation. This condition has also not been complied with so far, and matters seem to have reached a deadlock.

The daily supply for the year 1932-33 averaged about 241,855 gallons or 6.87 gallons per head, as againsts 217,819 gallons per diem for the previous year.

(3) AMRITSAR.—(POPULATION 263,210).

(i) *Drainage Works*.—Except in one area (the Dhab Sant Singh and Khatikan area) where a form of sewerage has been in existence for about 18 years, the city is drained on the surface drainage system. The drains are in many instances, old and in need of reconstructions—in fact a complete reorganization of the drainage of the municipal area and its reconstruction on modern lines is needed. A preliminary project, estimated cost Rs. 33,04,173 for a new sewerage scheme was prepared in 1925 but there is little hope at present of proceeding with the work, owing to lack of funds.

(ii) *Water-supply*.—The general state of the water supply works is similar to that reported last year. Certain repairs have been executed to the old steam pumping plant at the main headworks, which is still in use. The new electric pumping plant, so far, has not been put into commission, and no tube-wells to increase the yield of the headworks have been constructed.



The average daily quantity of water pumped for the year 1932-33 was 3,229,764 gallons or 12.27 gallons per head of population per diem, as against 3,272,528 gallons per diem for 1931-32.

(4) BHIWANI (POPULATION 35,866).

(i) *Waterworks*.—The Bhiwani Waterworks Scheme, estimated cost Rs. 5,90,267 was completed during the year. The works are based on the Western Jumna Canal, as a source of supply, and the raw water storage and sedimentation tanks have a total capacity of 24,745,550 gallons. The water after passing through slow sand filters is pumped into a overhead service reservoir of reinforced cement concrete about 60 feet high, capacity 50,000 gallons, from which it is distributed by cast iron pipelines throughout the town.

The works are designed for a daily supply of 204,000 gallons or 6 gallons per head for an estimated population of 34,000. Water has been supplied to the town since August 1933 and the scheme is giving satisfactory service.

(ii) *Drainage*.—The town is situated in a dry arid region and there is no drainage system. A surface drainage scheme with 2 outfall and disposal works and sullage farms was designed in 1932-33 at an estimated cost of Rs. 4,44,403. This scheme has been sanctioned and construction will be commenced early in 1934. With the completion of the surface drainage works, the sanitary condition of this town will be placed on a sound footing.

(5) CAMBELLPUR.—(POPULATION 7,897).

The waterworks were completed in 1925, the source of supply being a deep percolation well with borehole. The yield from the borehole has dropped to a serious extent.

The Municipal Committee has recently asked for proposals to be made for increasing the supply and this is under investigation.

(6) DERA GHAZI KHAN.—(POPULATION 23,468).

*Waterworks*.—The waterworks pumping plant at the new well headworks on the town side of the Manka Canal has been coupled to the 2 tube-wells at the old headworks by a cast iron suction main laid under the canal. The average daily supply pumped for 1932-33 was 148,938 gallons or 6.32 gallons per head on an estimated population of 23,468.

(7) FEROZEPUR.—(POPULATION 34,337).

(i) *Drainage*.—The Ferozepore drainage extensions scheme, covering the cost of a main storm water channel to carry flood water overflowing from the city drainage system to the river Sutlej, and also the provision of surface drains and pavements in the suburbs known as Basti Roda Manda, Roda Bhatti, Mamnewali, Bhattian and Khai Road, has been completed recently. The main storm water channel functioned satisfactorily in the monsoon of 1933.

(ii) *Water-supply*.—The domestic water-supply to the city is derived from open wells and there is no organized system of protected water supply. Thus there is serious liability of pollution of water drawn from the various percolation wells and a proper scheme of water supply is eminently desirable in the interests of public health, so as to reduce the risk of spread of water borne diseases.

(8) GUJRANWALA.—(POPULATION 58,716).

This large municipality is very backward from the point of view of sanitation, there being no organized water supply system, the sources of the existing supply being shallow abyssinian tube-wells with hand pumps which are liable to yield contaminated water.

The drainage system of the town is old, in bad repair and defective. It requires a thorough overhaul, while certain areas developed for building purposes within the past 15 or 20 years are devoid of drainage arrangements. This state of affairs is very unsatisfactory and there is urgent need for the local body to set its house in order to ameliorate the existing chronic condition of insanitation throughout the town.

(9) JAGRAON.—(POPULATION 27,108).

A simple surface drainage scheme, estimated cost Rs. 80,251 was carried out in 1931-33 for the Jagraon Mandi. The disposal works consist of a simple sullage collecting sump with bullock driven jhallars to lift the sullage on to land to irrigate crops. The Municipal Committee, however, does not work the jhallars regularly with the result that the sullage frequently heads up in the outfall and disposal works.

(10) JULLUNDUR.—(POPULATION 74,295).

(i) *Water-supply*.—Although this is a large and important town, there is no organized water supply system. Water is drawn from public and private percolation wells which are liable to pollution. Moreover spring level is gradually being lowered and in course of time all



these wells will become dry. The Municipal Committee in 1933 requested that plans and estimates for the introduction of a waterworks should be prepared, and proposals are under investigation to determine the best scheme.

(ii) *Drainage*.—The surface drainage scheme carried out in 1920—1926 at a cost of Rs. 7,33,412 is functioning satisfactorily.

Surveys were made in 1933 at the request of the Municipal Committee, for the preparation of extensions of the drainage system, and an estimate for Rs. 69,660 was prepared for part I of the subsidiary drainage works for Kot Khan Jahan, Mohalla Khakroban, Police lines area, a small area south and east of Sabzi Mandi and extensions along the Kapurthala Road.

(11) KARNAL—(POPULATION 25,371).

A skeleton surface drainage scheme with disposal works, pumping station and flushing installation, estimated cost Rs. 1,46,851, was completed in 1932. After operation by the Public Health Circle for a short time, the works were handed over for operation and maintenance by the local body in 1933.

(12) KASUR—(POPULATION 46,815).

This is another large town which is in a backward state so far as public water supply and drainage are concerned. There is no protected public water supply while the drainage arrangements require complete re-organization.

(13) LAHORE—(POPULATION 400,075).

(i) *Waterworks*.—The average daily supply from the municipal waterworks for the year 1932-33 was 5,520,000 as against 5,427,000 in 1931-32.

During the year six new independent tube-wells have been put down at various points in the municipal area each of a capacity in excess of a cusec. Each tube-well is equipped with a pair of electrically driven direct coupled centrifugal pumps which are arranged to discharge water into the distribution system through standpipes. These tube-wells will give an increase of supply equal to about 165,000 gallons per hour, or allowing for 16 hours pumping—say a maximum of 2,500,000 gallons per diem.

The old Ferozepore Road independent tube-well is also being replaced by a new deep tube-well, which it is anticipated will give a yield of about 30,000 gallons per hour, as against 8,000 gallons per hour from the old tube-well. It is also intended to replace similarly the old Lake Road independent tube-well.

When these wells are completed, the maximum available increase of daily supply will be over 3,000,000 gallons, a very welcome addition.

It was recommended in 1933 that six or seven large tube-wells, each of capacity of 25,000 gallons per hour, should be put down near the Badami Bagh pumping station so as to cut out the trench well system and the old percolation wells which are liable to yield polluted water. A start is being made to carry out these additions, and it is expected the first two tube-wells will be completed in 1934.

The Municipal Committee was advised early in 1933 to get the Hira Mandi Reservoir, cleaned down, repaired and painted. This has not been started so far. The "Paterson" chlorination apparatus at this reservoir needs overhauling and renewal of defective parts.

Old, inefficient or worn out pumping plants have been replaced by new plants at 4 tube-wells during the year.

The Lahore water supply re-organization scheme for which detailed plans and estimates were prepared in 1926, estimated cost Rs. 37,19,257, is still pending and there seems to be little hope of measures being taken to place the scheme in hand in the early future.

(ii) *Drainage*.—The Lahore sewerage scheme is held up indefinitely owing to lack of arrangements for the financing of the scheme, and the sanitary condition of the municipal area has deteriorated and is still steadily deteriorating from the point of view of drainage.

The Shish Mahal sewerage system and pumping station was taken over by the Public Health Engineering Circle in 1932 as it was in practically a derelict condition. The reconditioning work was taken in hand and is now approaching completion. The work includes a complete new pumping station and sewage pumping plant.

(14) LUDHIANA—(POPULATION 65,274).

(i) *Water-supply*.—The scheme was built in 1906—1909 at a cost of Rs. 4,44,595, the source of supply being a battery of 24 No. percolation wells about a mile south of the Civil Station. The designed capacity of the scheme was 500,000 gallons per diem for a population of 50,000.

Since the inception of the works, there have been no extensions although the population has now reached the figure of 65,274. The old steam pumping plant will soon be worn out and extensions of the waterworks are required. The matter is under investigation and proposals are being formulated for renewal of pumping plant and increasing the capacity of the works.



(ii) *Drainage*.—A drainage extension scheme, estimated cost Rs. 3,45,009, was carried out in 1929—32. These works included the provision of surface drains and pavements in new areas such as Wakefield Ganj and Chaoni Mohalla and also for drainage improvements in the older parts of the town. The main storm water channel discharging from the North-Western Railway area through Wakefield Ganj to the Budha nalla north of the town was also improved and pitched through the Wakefield Ganj area, while the sullage from this and adjoining areas was disposed of by gravity on to land east of the storm channel.

A saving of Rs. 39,166 was made on the main scheme and this is being spent in carrying out further surface drainage improvements and extensions in certain important areas, selected by the Municipal Committee.

(15) LYALLPUR—(POPULATION 42,923).

The water supply works, based on water from the Rakh Branch, Lower Chenab Canal, were originally built in 1904-05 and designed to supply 100,000 gallons of filtered water daily for a population of 11,000.

The population has increased rapidly. The works have been extended from time to time, the last extensions completed in 1933, consisting of a new clear water tank size 40' x 34' x 9' deep, a new pumping plant consisting of a semi-diesel oil engine (66 H. P.) driving high lift and low lift centrifugal pumps each of capacity of approximately 1,000 gallons per minute, a 14" i/d. cast iron rising main from the pumps to the existing steel service reservoirs, extensions to the pumping station and a new slow sand filter bed (No. 6) area 80' x 55'. The present maximum daily consumption of water is approximately 900,000 gallons.

From time to time since 1922 the attention of the Municipal Committee has been drawn to the fact that although it was increasing its waterworks installation in other respects, adequate raw water storage to tide over canal closures was being neglected.

The existing raw water storage tanks have a capacity of 16,674,000 gallons only and are far too small to tide over maximum periods of canal closures. There is urgent need for their enlargement so as to provide for 30 days storage, after allowing for evaporation and percolation losses. The additional storage capacity now required is approximately 20,000,000 gallons. The cost of these extensions will be about Rs. 90,000.

The proposal was recommended to the Municipal Committee in May 1933 who decided that there was no necessity to provide extra storage at once and that the difficulty of storage of raw water would be obviated by clearing silt out of the storage tanks and curtailing the supply to the town during the closure days. Obviously this decision of the Municipal Committee was wrong and such an urgent work as the provision of adequate raw water storage, should not be shelved.

There is also need of another slow sand filter and all filters should be provided with modern inlet controls and with gauges and discharge indicators on the outlets, while a mechanical sand washing machine is an urgent necessity.

The distribution system is in need of overhaul and larger mains are required to serve areas such as the Civil Station, Agricultural College and Jail where supplies are short, while the standposts, taps and other fittings should be improved.

(16) MOGA—(POPULATION 17,581).

A surface drainage scheme with outfall works and pumping station was completed in 1930 at an estimated cost of Rs. 1,76,204. The scheme has worked satisfactorily but need has been felt for improving storm water drainage facilities and proposals are under investigation at present.

There is urgent need of protected water supply for this town, the present water supply arrangements from shallow percolation wells and abyssinian tube-wells being liable to cause the spread of water borne diseases owing to pollution.

(17) MUKTSAR—(POPULATION 14,839).

(i) *Waterworks*.—The waterworks were completed in 1925-26 at a cost of Rs. 3,09,904. The works are based on water from the Sirhind Canal. The water is stored and sedimented in large storage tanks, total capacity about 5,625,000 gallons, after which it is passed through slow sand filters and pumped into a reinforced brickwork service reservoir, capacity 38,500 gallons, and distributed through the town through cast iron pipe lines. The designed capacity of the scheme was 120,000 gallons of filtered water per diem or 10 gallons per head of population, taken at 12,000. There are 43 public standposts and about 200 private connections, all of which are metered and the scheme has worked satisfactorily up-to-date, the average daily supply for the year 1932-33 being 122,000 gallons.

(ii) *Drainage*.—Only a part of the municipal area is provided with surface drains. Since the introduction of the water supply scheme, the sanitary condition of the town from the point of view of drainage has deteriorated and in many places pools of filthy water usually lie about. The Municipal Committee has been pressed to reorganize its drainage arrangements and a project for the work, estimated cost Rs. 1,35,253, was prepared and sent to the local body in 1932. This scheme, however, has not matured so far owing to financial difficulties.



## (18) MULTAN—(POPULATION 108,351).

(i) *Waterworks*.—The headworks near the "Qilla" consists of 4 tube-wells each equipped with a "Sulzer" vertical spindle electrically driven pump, the water being delivered into a rivetted mild steel service reservoir capacity 400,000 gallons, about 80 feet high, from which the water is distributed throughout the municipal area by means of cast iron distribution pipe lines. The daily supply for which the scheme was designed is 1,520,000 gallons, but due to the alleged poverty of the Municipal Committee and the high charges for electric power, the average daily supply has been maintained at about 178,559 gallons only, the water being distributed only through a restricted number of public standposts. The old percolation wells which used to supply the water for the population before the introduction of the water supply scheme, are still in use. These present a menace in the shape of a source of infection from which water borne diseases are liable to spread at any time.

(ii) *Drainage*.—Parts I and II of the Multan Drainage Scheme with separate outfall sewers and disposal works, equipped with modern electrically driven siltage pumping plants to lift the siltage and discharge it into carriers for gravity distribution on to the land of the siltage farms, have been completed since 1931-32 at a cost of Rs. 2,27,610 but have not been put into operation on account of financial stringency of the Municipal Committee which alleges that it cannot afford to meet the working expenses.

The organization and financial condition of the Municipal Committee are now under examination by Government and it is to be hoped that arrangements will be effected whereby this very backward local body will make a real effort to improve the sanitary condition of its area by arranging for the operation of the water supply scheme and Parts I and II of the drainage scheme on proper lines.

## (19) MURREE-JOINT WATER BOARD—(SUMMER POPULATION ABOUT 30,000).

The waterworks supplying the various military camps and cantonments on the Murree hills between Dunga Galli and Murree as well as the Murree municipal area and Murree cantonments were incorporated under control of the Murree Joint Water Board in 1931, the Executive Engineer, Lahore Public Health Division, being appointed Executive officer of the Board. Ample and timely rains fell in 1932 and a good supply of water was given throughout the hot weather season without full use of the new 3½ million gallons reservoir at Dunga Galli being resorted to.

Considerable improvements were carried out, in course of maintenance during the year, to the trunk line and its branches into the Khyra Galli tank and the Kuldana reservoir which have been fitted with equilibrium valves thus rendering it unnecessary to shut off the flow on the trunk line when these reservoirs are to be filled. Air valves were also fitted on the trunk line, while a small subsidiary oil engine and pump to serve the Kashmir point distribution system was fitted at the Tonley reservoir.

The Panch pandu reservoir relining work has not been carried out but ordinary repairs were executed early in the spring of 1933 so as to keep the reservoir as tight as practicable. A shortage of water was experienced in the military areas of Gharial, Upper and Lower Topa. This was due to the small size of the trunk distribution pipe line serving these areas from the Tonley reservoir. The position was improved by increasing the pressure head, utilizing the Panch pandu reservoir for that purpose, but nothing short of putting in a new pipe line will enable a satisfactory water supply to be afforded.

The average daily supply for the year 1932-33 was 138,203 gallons the average daily supply in June being 236,997 gallons. The Murree Municipality took 27,516,726 gallons being 54.55 per cent. and the Military authorities took 22,927,378 gallons, or 45.45 per cent. of the total annual supply.

## (20) PATHANKOT—(POPULATION 9,763).

The waterworks were completed in 1929 at a cost of Rs. 1,69,805 and are based on a large percolation well sunk into water bearing gravel formation as a source of supply. The water is pumped by a pair of oil engine driven deep well type pumps through a 6 inches c.i. rising main about 1,800 feet long into a covered service and storage reservoir on the Public Works Department rest-house mound, whence the water is distributed through cast iron pipe lines through the town.

The designed capacity of the scheme is 100,000 to 120,000 gallons per diem or 10 to 12 gallons per head for an estimated population of 10,000.

The average daily supply for the year 1932-33 was 60,200 gallons. The operation of the scheme is in the hands of the Public Health Circle.

## (21) PIND DADAN KHAN—(POPULATION 9,832).

The original Pind Dadan Khan water supply headworks, built in 1908-09, were washed away by the river Jhelum in 1930 after which a temporary pumping station and well were built about 2 miles upstream of the town close to the right bank of the river, and a temporary rising main laid to the town. These functioned till 1933 when they also were washed



away by the river. A second temporary well was put down a little further from the river but the water proved brackish and as a last resort the plant was shifted to the site of the old waterworks and water from an arm of the river was pumped to the town. Due to the infiltration of salt laden water from the direction of the Khewra Salt Mines into the river, the subsoil water along the right bank is brackish and the sweet water zone influenced by the river lies close along the bank. The river is liable to considerable changes of course and no pumping station sited near the bank is safe against erosion. A scheme, estimated cost Rs. 2,08,149, for protected water supply for the town based on percolation wells sited near the right bank of the river 6 miles upstream of Pind Dadan Khan near Haranpur was prepared in 1932. In this scheme the headworks and pumping station will be protected against erosion by the North-Western Railway bridge at that point.

The distribution system inside the town is in a hopeless condition—the pipes having been seriously corroded by subsoil salts. The system requires almost complete renewal at an estimated cost of about Rs. 35,000. These 2 schemes are of an urgent character, and until they are carried out the Pind Dadan Khan water supply arrangements will remain in their present hapless state.

(22) RAWALPINDI—(POPULATION 75,767).

(i) *Waterworks*.—The average daily supply was 1,378,427 gallons for 1932-33 as against 1,478,890 gallons for 1931-32.

The supply is intermittent owing to waste of water caused mainly by numerous house connections, the Committee not having enforced a system of universal metering of house connections.

The general condition of the works is deteriorating owing to faulty administration. In 1933, the steel storage reservoir damaged owing to corrosion, was repaired and painted. Towards the end of the year one of the 77 H. P. semi-diesel engines driving one of the main well pumps broke into two.

(ii) *Drainage*.—The main sullage disposal works and pumping station have not been operated by the Municipal Committee for some time and the plant has become derelict and obsolete. The Municipal Committee has been advised to get a scheme for reconstruction of the disposal works and pumping plant prepared and carried out but has not taken effective action.

The river Leh is being polluted throughout its course through the municipal area and also through the cantonments downstream of the city by the discharge of sullage and wastes from the city, also by the North-Western Railway, the Civil Lines, the Military and Cantonment Board and the Brewery.

A scheme for the construction of a graded channel in the bed of the Leh to carry the dry weather flow, from the upstream side of the city to a rock escarpment downstream of the Cantonment area has been prepared and it is hoped that work will commence in 1934 with a view to reduce the present nuisance.

(23) REWARI—(POPULATION 24,680).

The waterworks constructed in 1916-20 are based on four deep percolation wells about a mile from the town, the water being pumped by a pair of oil engine-driven well type bucket pumps through a 10 inches cast iron rising main to a rivetted mild steel reservoir in the town from which it is distributed through cast iron pipelines.

The pumps which were built in India are of a poor design and are worn out. An estimate has been furnished to the local body for their replacement. This is a matter of urgent necessity.

(24) ROHTAK—(POPULATION 35,235).

(i) *Waterworks*.—The waterworks which is based on the Western Jumna Canal was completed in 1931 at an estimated cost of Rs. 5,42,130.

The scheme was operated by the Public Health Circle until March 1932, when it was handed over to the local body for maintenance.

The scheme is designed for a daily supply of 240,000 gallons of filtered water, or 8 gallons per head per diem for an estimated population of 30,000.

The raw water storage tanks are 20 feet deep and have a capacity of 22,500,000 gallons. These are lined with brick on edge pitching in lime mortar. When the works were put into operation in 1932, the percolation losses in these tanks were heavy. This is the usual experience with tanks of this type. As a result of use, however, they are now tightening up normally.



(ii) *Drainage*.—The town was provided with a surface drainage scheme complete in 1922. The drains, together with side walls, parapets, culverts and other works are deteriorating owing to lack of attention and repairs by the local body.

(iii) *Flood of 1933*.—The town was flooded in September 1933 as a result of abnormally heavy rainfall amounting to 24 inches in 24 hours. The lower part of the town including the area in which the Government Intermediate College and also the bazars and streets between the town and the railway station were inundated, the depth of water being upwards of 7 or 8 feet in certain places. A number of oil engine driven pumping plants were installed and worked to dewater the inundated areas, at an estimated cost of Rs. 7,500 by the Public Health Engineering Circle.

(25) SARGODHA—(POPULATION 26,771).

(i) *Drainage*.—The surface drainage system was originally constructed in 1903—07 and has been extended from time to time with the growth of the town. The disposal works are in a derelict state and the pumping plant is lying in a broken down condition. The Municipal Committee has been pressed on several occasions to put the works into proper order without avail.

(ii) *Water-supply*.—The works are based on the Lower Jhelum Canal as source of supply. The average daily supply for 1932-33 was 326,873 gallons or about 12·21 gallons per head for an estimated population of 26,771. The scheme, including the filters is seriously overworked and as recommended in last year's report, an extension scheme is much needed. Meanwhile the number of private connections is increasing and shortage of water is becoming more acute. No action has been taken by the Committee to institute a system of universal metering of house connections so far in spite of recommendations made from time to time to them.

(26) SIALKOT.—(POPULATION 85,093).

(i) *Waterworks*.—The average daily supply was 848,636 gallons for 1932-33 as against 678,065 for 1931-32.

In 1932 the main pumping plant at the waterworks was found to be in need of thorough overhaul and early in 1933 action was taken to place on order a spare pump body. This has been delivered and is ready for fitting up when required. The internal flanges or ribs on the existing pump bodies, to which the pump thimbles are bolted, which had been eaten away have been patch welded. They have not been inspected since this work was carried out and it remains to be proved by experience whether the repairs will be effective. The discharge of the existing four tube-wells at the headworks is reported to be showing signs of decrease. This was foreseen in 1932 when the municipal committee was advised to take action to put down a 5th tube-well, estimated cost Rs. 8,437, immediately, so as to be ready to meet the reduced yield of the present tube-wells. So far the Municipal Committee has not carried out this advice.

The "Tibba" tube-well and pumping plant constructed in 1927-28 was originally equipped with an oil engine driving a treble action ram pump, well type. This installation was handed over to the local body in 1930.

In 1930 the Municipal Committee installed an electric motor in place of the oil engine, against the advice of this department, which considered that no saving in running costs would accrue. The electric motor has now been dismantled and the oil engine is again at work.

The plant was inspected in 1933 and found to be in a dirty condition. The pump was knocking and is in need of overhaul, while the pump house was also in a dirty condition. The steel service reservoir at the "Tibba" was leaking and the joints of certain plates required to be attended to. The reservoir also required painting. The overflow pipe of the reservoir had been plugged in order to fill the reservoir, an extra 12 inches depth and when it overflowed, the water spilled all round over the sides.

An additional tube-well with pumping station and plant, capacity about  $\frac{1}{2}$  a cusec, estimated cost Rs. 22,000, to serve the Rangpura area was put in hand in 1933 on land the property of the Municipal Committee, adjoining the Circular road near Rangpura. The bore was taken to a depth of 262 feet. On testing, the yield was unsatisfactory and a second bore has been sunk to a depth of 302 feet. Orders have been issued for the strainer for the second tube-well and after the tube-well is completed, it will be tested. On sinking the second tube-well, it was found that the "spring" level of water in the more deep seated water bearing strata was about 10 feet lower than in the upper shallow water bearing strata. This is the first case of such phenomenon being met at Sialkot and it probably accounts to a large extent for the low yield of the first tube-well under test.



As soon as the Rangpura tube-well pumping station is completed, a second tube-well to serve another portion of the suburban area should be proceeded with. In spite of the fact that the water supply is intermittent and the large number of house connections, measures for universal metering of house connections have not been adopted so far by the local body.

(ii) *Drainage*.—The intercepting and outfall drains, sullage disposal works and pumping station completed in 1928 were operated by this Department till 1931, when they were handed over to the local body. The works have deteriorated since the Municipal Committee took over charge. The side pitching of the disposal works at several points has collapsed and requires immediate attention. The pumping plant is in need of attention and the local body does not see that timely renewals and replacements of worn or defective working parts are made and that a proper stock of such spares are maintained at the works.

The general standard of cleanliness and sanitation at the disposal works is unsatisfactory.

A section of the intercepting drain near the Imamshah, held up for over 5 years owing to a dispute, is now being completed, while the comparatively small amount of intra-mural drainage and paving works incorporated in the sanctioned estimate for the drainage scheme has also been completed.

There is sore need for extensions of the intra-mural surface drainage works, not only in the central urban area where many streets and lanes are in a bad state, but also in newly developing areas such as Railway and Artillery roads and also in suburban village areas within municipal limits such as Rangpura, Nekapura, &c. In these areas, drainage arrangements are conspicuous by their absence and the sanitary condition of lanes and streets is exceedingly bad. Projects are now in course of preparation for the more important of these areas and the Municipal Committee has expressed its intention to arrange for funds for carrying out these much needed improvements at an early date.

#### (27) SIMLA.

(i) *Water-supply*.—The average daily supply for the year 1932-33 was 583,301 gallons as against 594,783 gallons for 1931-32. There was good and timely rainfall during the monsoon of 1933. The waterworks were examined in September 1933 and were found generally in good condition, but the alignment of one of the electrically driven pumps at Guma was defective and required early adjustment. The Guma pumping station was understaffed and the log book showed that at times men had worked 11 to 18 hours daily for days on end. This is unsatisfactory, as a strain is put on the staff which is prejudicial to safe working and it is under such conditions when the senses are dulled by long hours of work, that breakdowns and severe accidents are most apt to occur. At the upper and lower catchments, a too severe retrenchment of establishment had also taken place and deterioration in maintenance was occurring.

A detailed hydraulic survey of the gravitation catchment area to determine what improvements can be effected with a view to reducing cost of pumping, particularly at Chair and Guma, has been put in hand. The boilers at the Cheroot nallah pumping station are in urgent need of renewal. This is a matter to which the special attention of the Municipal Committee has already been drawn. The staff quarters and stores of the waterworks department in Simla below the Meat Market are in an insanitary condition. They should be demolished and rebuilt on correct lines.

(ii) *Drainage*.—A scheme for drainage extensions estimated to cost Rs. 5,02,121 was prepared in 1930 by the local body. The proposals mainly consist of the provision of sewers of larger diameter in place of the existing main and outfall sewers of the North, Snowdon, Kasumpti, Lalpani and Summer Hill disposal works, which were reported by the drainage engineer, to cause trouble owing to continual blockages. The scheme was referred back to the local body towards the end of 1932 in order for the proposals to be examined carefully by the new drainage engineer. It was recommended that all sewer inlets should be inspected and, where necessary, protected by suitable screens or gratings so as to effectually prevent old tin cans, utensils, brushes and other articles causing obstruction, from being passed into the sewers. The scheme is still with the Municipal Committee. Work of this nature requires much forethought and care in execution and it is impracticable to rush the work. It is far better that the work should be taken in hand piecemeal and its execution spread over a period of 6 or 7 years. Thus the annual expenditure will be about Rs. 80,000 only.

7. *Rural water-supply schemes*.—(1) *Musakhel water-supply* (population 3,000), estimated cost Rs. 37,394.—This is an independent water supply system for the important village of Musakhel, District Mianwali. The water is derived from a deep borehole equipped with a deep well reciprocating pump, driven by oil engine, the water being pumped into a reinforced brickwork storage reservoir close by and distributed by a number of standposts fixed close to the headworks. During the year an extension pipe line to serve the police station and police married quarters was completed. The average daily supply pumped during the year 1932-33 was 10,440 gallons and the scheme functioned satisfactorily. The cost of maintenance is provided by the Mianwali District Board.



(2) *Tamman water-supply, estimated cost Rs. 78,894.*—This is a comprehensive scheme of protected water supply for the large village of Tamman, District Attock, population about 6,000. The source of supply consists of 2 percolation wells on the shore of a nullah some distance from the village wherefrom water is to be pumped by oil engine driven pumping plant into a pressed steel service reservoir at the highest point of the village and distributed through public standposts. Subsidiary pipelines and storage tanks with taps are provided at the District Board rest-house and school, &c. The scheme was completed and ready for operation in 1932 but owing to failure of the Attock District Board to provide the maintenance funds, the installation is at a standstill. It is a great pity that this should have been the fate of one of the first as well as one of the best rural water supply schemes carried out in this Province.

(3) *Thal Ilacqua water-supply, District Jhelum, estimated cost Rs. 1,48,043.*—This scheme which was completed in 1928, consists of headworks at a spring at Sardi in the Salt Range, the water of which is piped by a steel pipe line through a gorge in the southern escarpment of the Salt Range, across the salt bearing formation, *via* Pir Khara, terminating in a masonry service reservoir about 3 miles north of Lilla. The original intention was that the Jhelum District Board would arrange for branch distribution pipe lines to deliver the water to Lilla and other villages intended to be served by the scheme, but after the completion of the trunk pipe line, this fell through and thus the scheme, consisting merely of headworks, trunk pipe line and service reservoir far away from any village, serves no useful purpose, in its present condition.

Proposals have been put forward to construct distribution pipelines and branch reservoirs to serve the villages of Lilla, Dhudi and Jethal (population 6,013) from the tail of the existing trunk line at an estimated cost of Rs. 53,042 and it is hoped that it will be possible to commence work in 1934. In the meantime it has been found that the trunk pipe line has been corroded by brackish sub-soil and a sum of Rs. 9,565 has been allotted by the Sanitary Board, Punjab, for repairs and re-coating of the pipeline in the lower section from Pir Khara to the service reservoir and work will be put in hand shortly.

8. *Fairs.*—(1) *Nurpur Fair (District Rawalpindi).*—The fair was held during April. An overseer was posted to control the working of the water supply scheme which consists of headworks at a spring about 2 miles from Nurpur, the water being passed by gravity through a 4" main into a covered service reservoir on a mound near the fair ground. The water was distributed through standposts in the fair area and the village. The total quantity of water supplied during the fair period was about 1,500,000 gallons.

Water is supplied throughout the year to the village of Nurpur. The total water supplied during the year was about 7,000,000 gallons.

(2) *Choa and Katas Fair (District Jhelum).*—The fair was held from the 8th April to the 15th April. An assistant engineer, overseer and other staff were present at the fair, to operate the water supply arrangements which consisted of steam pumping plant lifting the water from the Katas spring to slow sand filters on high ground. The water after gravitating through the filters is stored in a masonry storage reservoir, capacity about 250,000 gallons, whence it is distributed through public standposts in the fair areas at Katas and Choa, the Pirkaudi grounds and along the road connecting Katas and Choa. The total quantity of water supplied during the fair period was 500,000 gallons.

(3) *Jowalamukhi Fair Water-supply (Kangra District).*—The fair was held twice during the year, *i.e.*, from 27th March to 5th April and from 20th September to 29th September.

The water supply arrangements were operated by staff of the Public Health Circle including temporary pumping plant consisting of a Boulton elevator driven by an oil engine, installed on a well in the village.

The total quantities of water supplied during each fair period were (a) April, about 200,000 gallons, and (b) September, about 200,000 gallons. The scheme supplied water throughout the year to the small town of Jowalamukhi and the temples nearby.

(4) *Pehowa Fair (Karnal District).*—Pumping plant of the Public Health Department from Thanesar were loaned to the Karnal District Board, for the Pehowa Fair held in April 1933. The plant was erected, kept in order and dismantled by the staff of the Public Health Circle.

(5) *Sun Eclipse Fair at Kurukshetra.*—Extensive water supply and sanitary arrangements were installed at a cost of over Rs. 1,50,000 for the previous fair held in November 1928. After the fair all pipelines, fittings and pumping plants, &c., were stored in a godown built near the site. The permanent water supply arrangements laid down in 1928 consisted of 3 tube-wells, each yielding about 10,000 gallons per hour of water and equipped with oil engine driven pumps, 3 pressed steel service reservoirs on staging, capacity 30,000 gallons each, and about 27,000 feet of steel distribution pipelines with 250 taps, 6 No. 400 gallon



tanks with taps, 22 mashak filling connections and 9 road watering cart filling stand pipes. 41 No. percolation wells were fitted with hand operated or mechanically operated temporary pumping or water elevating arrangements. About 600 latrine seats and 11 incinerators were provided. A chlorination apparatus for using gaseous chlorine was installed in a proper building to enable strong chlorine solution to be prepared for disinfecting wells and tanks at and in the vicinity of the fair.

The population attending the fair was estimated at about 700,000.

For the fair held in August 1933, one of the three existing tube-wells was replaced owing to its yield having deteriorated, while a 4th tube-well with pumping plant was built. A spare pumping set was also provided for emergency use. The distribution system was relaid and extended and water was supplied through 167 public standposts with 2 taps each while water connections were also given to hospitals, police posts, main police lines and the rest-house.

A number of Boulton elevator plants were installed on percolation wells and all wells at the fair area and in the vicinity were regularly chlorinated with chlorine solution prepared by means of the chlorination plant. Eighty-seven new borehole latrines and 458 new pan latrines, together with shelters for combustible materials for incinerators were built. The total number of latrine seats provided was about 1,200.

These water supply and sanitary arrangements functioned satisfactorily, the population being estimated at about 400,000.

D. A. HOWELL, M. INST. C. E., M. I. MECH. E.,

*Superintending Engineer,*

*Public Health Circle, Punjab.*



## STATEMENT A.

**List of projects prepared in the Public Health Circle, Puajab,  
during the year 1933.**

Serial No.	Name of work.	Amount.	Total.
		Rs.	Rs.
<b>I.—GOVERNMENT WORKS.</b>			
<i>(a) DETAILED PROJECTS.</i>			
<i>(1) Major Works.</i>			
1	Independent water supply, District Police Lines, Amritsar.	12,996	
2	Additions to the City Kotwali, Lahore, in order to provide better accommodation for British troops when called out in aid of civil power .. ..	33,763	
3	Rivaz Gardens Estate—improvements to water supply .. ..	11,318	
4	Drainage of Clerks' Quarters, Irrigation Branch, Lyallpur .. ..	17,962	
5	Providing a new outfall drain for the quarters at District Police Lines, Qilla Gujar Singh, Lahore ..	16,530	
6	Additional tube-well, pumping chamber and plant at Thanesar .. ..	12,519	
	Total .. ..	1,05,088	
	(2) Minor Works .. ..	3,60,708	
	(3) Maintenance estimates .. ..	3,77,382	
			8,43,178
<i>(b) PRELIMINARY PROJECTS.</i>			
1	Providing sanitary works in the proposed Mandi town of Pir Mahal, District Lyallpur .. ..	1,13,340	
2	Sakesar Water supply .. ..	34,000	
			1,47,340
	Total .. ..	..	9,90,518
<b>II.—CONTRIBUTION WORKS.</b>			
<i>(a) DETAILED PROJECTS.</i>			
<i>(1) Major Works.</i>			
1	Lahore Municipal Committee—proposed tube-well near Tahsil School, Said Mitha Bazar .. ..	18,536	
2	Lahore Municipal Committee—proposed tube-well outside Shahalmi Gate .. ..	20,117	
3	Lahore Municipal Committee—proposed tube-well at Cattle Barracks, Akbari Gate. .. ..	20,117	
4	Lahore Municipal Committee—proposed tube-well outside Bhati Gate .. ..	20,117	
	Carried over .. ..	78,887	



Serial No.	Name of work.	Amount.	Total.
		Rs.	Rs.
	II.—CONTRIBUTION WORKS—CONCLD.		
	(a) DETAILED PROJECTS—concl'd.		
	(1) Major Works—concl'd.		
	Brought forward ..	78,887	
5	Lahore Municipal Committee—proposed tube-well on Chamberlain Road ..	20,117	
6	Shahzada Nangal Drainage, Gurdaspur ..	12,670	
7	Isakhel waterworks—reconditioning of headworks ..	13,984	
8	Pind Dadan Khan—skeleton distribution system ..	23,299	
9	Bhiwani drainage scheme ..	4,62,440	
10	Gojra drainage extensions near Grain Market ..	12,063	
11	Multan water supply—additional tube-well and pump house ..	10,546	
12	Thal Ilacqua water supply—extensions to Lilla, Dhudi and Jethal (revised) ..	53,042	
13	Kamoki Mandi drainage scheme ..	40,470	
14	Jagadhri Drainage—Improvements to Bhawan and Light Railway Bazar ..	14,641	
15	Khanna drainage scheme ..	18,785	
	Total ..	7,60,944	
	(2) Minor Works estimates ..	1,39,430	
	(3) Maintenance Works estimates ..	91,545	
			9,91,919
	(b) PRELIMINARY PROJECTS.		
1	Phullerwan drainage extensions ..	82,126	
2	Sialkot drainage extensions—Nekapura and Hamza Gaus suburbs ..	10,427	
3	Sheikhupura drainage in new Mohalla ..	22,852	
4	Dera Ghazi Khan drainage scheme ..	10,38,850	
5	Khushab drainage scheme ..	38,022	
6	Sakhi Sarwar water supply ..	92,019	
7	Sargodha water supply—two additional filters ..	16,535	
8	Hassan Abdal Fair water supply ..	16,423	
9	Jullundur drainage extensions (Part I) ..	69,660	
10	Thal Ilacqua water supply—protection of pipeline ..	10,005	
11	Lahore drainage—Improvements to Rajgarh pumping station ..	27,300	
12	Dalhousie water supply—extensions to Upper Bak-rota ..	17,000	
13	Nankana drainage—road metalling ..	25,181	
	Total ..		14,66,400
			24,58,319

## SUMMARY.

	Rs.
I.—Government Works ..	9,90,518
II.—Contribution Works ..	24,58,319
Total ..	34,48,837



# STATEMENT B.

## STATEMENT OF PUNJAB WATERWORKS FOR THE YEAR ENDING 31st MARCH 1933.

Serial No.	Name of Waterworks.	Population at the census of 1931.	Average daily quantity of water supplied during the year ending 31st March 1932.	Average daily supply per head of population.	RECEIPTS.				EXPENDITURE.								BALANCES.		REMARKS.		
					Water rates.	Rate of water.	Rent of meters.	Other receipts.	Total receipts.	Establishment.	Pumping.	Intake.	Settling tanks and filters.	Distribution.	Repairs.	Water analysis.	Miscellaneous.	Total expenditure.		Credit balance.	Debit balance.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	Abolar ..	14,055	96,993	6' 91	2,308	240	961	8,927	12,526	3,286	1,277	2,785	984	2,759	200	..	133	11,424	1,102	..	Rs.
2	Amala City ..	35,193	241,855	6' 87	13,644	..	..	5,543	19,187	11,107	10,222	1,136	..	833	57	..	7,534	20,889	..	11,702	..
3	Amala Civil Station ..	2,100	22,191	10' 56	..	..	..	..	..	480	4,404	..	..	..	19	..	..	4,993	..	4,993	..
4	Anarisar ..	263,210	3,229,764	12' 27	..	95,678	1,456	7,050	1,04,164	29,617	65,496	..	..	2,000	707	..	..	97,820	6,344	..	..
5	Bahwal ..	4,082	35,440	8' 68	..	373	102	60	908	1,070	603	325	400	73	614	13	672	3,770	..	2,862	..
6	Campbellpur ..	7,897	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7	Chak Jhumra ..	4,094	30,000	7' 22	611	..	..	..	611	762	1,730	820	74	..	151	..	1,184	4,601	..	4,050	..
8	Choa and Kotas ..	20,000	(Fair)	..	..	..	..	..	..	658	344	..	..	..	1,542	..	538	2,882	..	2,882	..
9	Dehlee ..	1,030	20,000	(Variable)	4,744	..	..	..	4,744	414	..	..	..	850	79	47	..	1,390	3,354	..	..
10	Dera Ghazi Khan ..	23,468	148,328	6' 32	..	2,601	226	..	2,827	2,328	1,079	..	..	3,711	1,634	..	1,807	11,489	..	8,652	..
11	Dharamnala Municipal Committee.	3,976	49,321	12' 40	3,566	15	..	..	3,611	1,419	..	..	156	..	447	..	126	2,148	1,403	..	..
12	Dharamnala Cantonment ..	2,283	22,518	9' 44	170	..	..	..	170	1,277	..	664	..	..	794	..	..	2,735	..	2,356	..
13	Gofra ..	9,779	70,000	7' 15	339	..	..	230	578	1,379	2,379	..	1,077	2,106	..	..	6,140	13,081	..	12,565	..
14	Isakhel ..	7,457	14,560	1' 95	..	..	..	..	..	683	178	..	..	340	48	..	348	1,502	..	1,502	..
15	Jaranwala ..	7,510	94,300	12' 55	..	3,00	..	..	3,000	895	1,295	976	812	..	648	16	..	4,642	..	1,042	..



[illegible]



# **STATEMENT C.** **STATEMENT OF URBAN DRAINAGE WORKS FOR THE YEAR ENDING 31st MARCH 1933.**

Name of Municipality.	GENERAL.						EXPENDITURE.						RECAPIT.		REMARKS.	
	Total, inhabited area (in acres).	Population.	Source of water supply.	Average daily quantity of water supplied or used (in gallons).	Quantity of sewage or refuse disposed of daily (in gallons).	Means and material of disposal of sewage.	Area under cultivation by application of sewage, if any (in acres).	Cost of Conservancy staff for the up-keep and cleaning of drains and streets.	Cost of repairs and renewals to drains, discharging works, etc.	Cost of lifting or pumping sewage.	Cost of operation of sewage farm.	Cost of lifting or pumping flush water.	Other miscellaneous expenses.	Sale proceeds in respect of sewage or refuse or of crops.		Any other miscellaneous income due to direct or indirect taxation or income from other sources in connection with drainage.
1															17	
HISSAR DISTRICT.																
1. Bhiwani Municipal Committee	Acres.	..	..	Gallons.	Gallons.	..	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	No drainage.
2. Hissar Municipal Committee	32	18,255	Do.	26,712	..	..	..	..	..	..	..	..	..	..	..	No drainage.
3. Hissar Municipal Committee	2,500	25,179	Do.	20,039	..	Tarara into canal	..	4,102	295	..	..	..	1,277	..	..	No drainage.
4. Fatehabad North Area Committee.	..	..	..	..	..	..	..	9,214	494	..	..	..	2,100	..	..	No drainage.
5. Sira Municipal Committee	925	16,855	Percolation wells.	168,550	4,375	..	..	7,716	586	..	..	..	..	..	..	No drainage.
6. Tohana Small Town Committee.	99	7,461	Do.	43,039	2,000	By oars	..	972	72	..	..	..	..	..	..	No drainage.
7. Bahhalda Small Town Committee.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	No drainage.
8. Dabwali Manoli Small Town Committee.	..	..	Canal water	..	..	..	..	..	..	..	..	..	..	..	..	No drainage.
9. Jakhal Small Town Committee	14	759	Percolation wells.	..	..	..	..	300	259	..	..	..	..	20	..	No drainage.
10. Kahanwalli Small Town Committee.	13	1,155	Canal water	..	..	Partly discharged into Nuliah and partly applied to land.	..	..	..	..	..	..	..	12	340	No drainage.
ROHTAK DISTRICT.																
1. Rohtak Municipal Committee	..	..	Canal water	..	..	..	..	..	..	..	..	..	..	..	..	No drainage.
2. Jhajjar Municipal Committee	158	12,232	Percolation wells.	18,748	5,000	..	..	2,184	..	..	..	..	..	..	..	No drainage.
3. Beri Municipal Committee	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	No drainage.
4. Gehana Municipal Committee	118	6,963	Percolation wells.	..	..	..	..	..	..	..	..	..	..	..	..	No drainage.
5. Bahadurgath Municipal Committee.	118	6,963	Do.	69,630	..	Discharged into storm-water drains now Aboli.	..	911	..	..	..	..	..	..	20	No drainage.
6. Mehna Small Town Committee	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	No drainage.
7. Sonapat Municipal Committee	..	..	Percolation wells.	..	..	..	..	..	..	..	..	..	..	..	..	No drainage.



GURGAON DISTRICT.												
1. Farnkhuagar Notified Area Committee.	..	..	..	..	..	..	..	..	..	..	..	No drainage.
2. Solana Notified Area Committee	..	..	..	..	..	..	..	..	..	..	..	..
3. Bawari Municipal Committee	..	..	..	..	..	..	..	..	..	..	..	..
4. Palwal Municipal Committee	..	..	..	..	..	..	..	..	..	..	..	..
5. Hoshal Municipal Committee	..	..	..	..	..	..	..	..	..	..	..	..
6. Firozpur-Jaika Municipal Committee.	1,034	5,290	Wells	..	..	..	..	2,193	..	..	..	No water works and drainage.
7. Hidyapur Gawal Small Town Committee.	..	..	..	..	..	..	..	..	..	..	..	..
8. Nuh Notified Area Committee	..	..	..	..	..	..	..	..	..	..	..	..
9. Hoshin Notified Area Committee.	61	2,945	..	..	..	..	..	396	..	..	..	..
10. Bahadurgarh Municipal Committee.	359	4,162	Wells	..	1,900	..	..	2,063	..	..	15	No drainage.
11. Faridabad Municipal Committee.	193	5,134	Do.	..	..	..	..	1,404	..	..	400	..
KARNAL DISTRICT.												
1. Karnal Municipal Committee	741	25,371	Percolation wells and private tube wells.	..	29,000	..	11-24	..	2,178	1,913	507	The sewage farm is leased to a civil contractor.
2. Karnal Civil Station Notified Area Committee.	..	..	..	..	..	..	..	..	..	..	562	No water works.
3. Panchpat Municipal Committee	..	..	..	..	..	..	..	..	..	..	..	..
4. Kalhat Municipal Committee	..	..	..	..	..	..	..	..	..	..	..	..
5. Kalhat Small Notified Area Committee.	..	..	..	..	..	..	..	..	..	..	..	..
6. Shahabad Municipal Committee.	..	..	..	..	..	..	..	..	..	..	..	..
7. Thanesar Municipal Committee	1,280	5,032	Percolation wells.	..	20,000	..	..	1,713	..	..	..	No drainage.
8. Ladwa Small Town Committee	..	..	..	..	..	..	..	..	..	..	..	..
9. Pandri Municipal Committee	59	6,043	Percolation wells.	..	..	..	..	982	..	..	..	..
10. Radur Municipal Committee	..	2,904	Do.	..	..	..	..	364	..	..	1,704	..
AMBALA DISTRICT.												
1. Ambala Municipal Committee	..	..	..	..	..	..	..	..	..	..	..	..
2. Jagadhri Municipal Committee	..	..	..	..	..	..	..	..	..	..	..	..
3. Baria Municipal Committee ..	..	..	..	..	..	..	..	..	..	..	..	..
4. Sadhaura Municipal Committee	620	7,769	Percolation wells and tube wells.	..	56,000	..	..	1,464	99	132	..	..
5. Bapat Municipal Committee ..	117	8,764	Percolation wells.	..	10,000	..	4-16	3,576	276	..	620	..
6. Kalka Small Town Committee.	..	7,937	Rawlins Reservoir.	..	65,000	..	..	3,960	343	..	..	..



# STATEMENT C.

STATEMENT OF URBAN DRAINAGE WORKS FOR THE YEAR ENDING 31st MARCH 1943—CONTINUED.

Name of Municipality.	GENERAL.										EXPENDITURE.					RECEIPTS.			REMARKS.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
	Total inhabited area (in acres).	Population.	Source of water supply.	Approximate average daily quantity of water supplied or used (in gallons).	Quantity of sewage or refuse disposed of daily (in gallons).	Means and methods of disposal of sewage or refuse.	Area under cultivation and by application of any (in acres).	Conveyance staff for the up-keep and cleaning of drains and streets.	Cost of repairs and renewals to drains, disposal works, flushing installation and other contingent works, etc.	Cost of lifting or pumping sewage or sewage water.	Cost of operation of sewage farm.	Cost of lifting or pumping flush water.	Other miscellaneous expenses.	Salvage proceeds in respect of crops.	Any other miscellaneous income due to direct or indirect taxation or other sources in connection with drainage.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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No drainage  
scheme.



No.	Name of Committee	Area in Sq. M.	Population	Revenue	Water supply	Drainage	Electricity	Public health	Education	Other	Total
1.	Tha Small Town Committee	137	3,000	..	..	..	..	..	..	..	..
2.	Amadpur Small Town Committee	..	..	..	..	..	..	..	..	..	..
3.	Khanpur Small Town Committee	..	..	..	..	..	..	..	..	..	..
4.	Karbhakhar Municipal Committee	..	..	..	..	..	..	..	..	..	..
5.	Jalun Municipal Committee	33	2,405	..	..	..	..	..	..	..	..
6.	Sham (Buras) Municipal Committee	..	3,186	..	..	..	..	..	..	..	..
7.	Jellundur District	..	..	..	..	..	..	..	..	..	..
8.	Jellundur Municipal Committee	..	..	..	..	..	..	..	..	..	..
9.	Kartarpur Municipal Committee	..	..	..	..	..	..	..	..	..	..
10.	Abawalpur Small Town Committee	53	4,627	..	..	..	..	..	..	..	..
11.	Nakodar Municipal Committee	..	9,584	..	95,840	..	..	..	..	..	..
12.	Phillaur Municipal Committee	..	..	..	..	..	..	..	..	..	..
13.	Narnahal Small Town Committee	1,421	7,814	..	6,000	..	..	..	..	..	..
14.	Nawanshahr Small Town Committee	65	7,135	..	..	..	..	..	..	..	..
15.	Rahen Municipal Committee	..	..	..	..	..	..	..	..	..	..
16.	Banga Municipal Committee	..	..	..	..	..	..	..	..	..	..
17.	Ludhiana District	..	..	..	..	..	..	..	..	..	..
18.	Ludhiana Municipal Committee	..	..	..	..	..	..	..	..	..	..
19.	Jagrao Municipal Committee	641	27,108	..	406,500	295,000	..	..	..	..	..
20.	Rackel Municipal Committee	220	11,810	..	..	..	..	..	..	..	..
21.	Khana Small Town Committee	1,644	7,068	..	166,320	..	..	..	..	..	..
22.	Ferozepore District	..	..	..	..	..	..	..	..	..	..
23.	Ferozepore Municipal Committee	2,257-97	34,337	..	515,035	100,000	..	..	..	..	..
24.	Zira Municipal Committee	..	..	..	..	..	..	..	..	..	..
25.	Moga Municipal Committee	..	..	..	..	..	..	..	..	..	..
26.	Muktsar Municipal Committee	..	..	..	..	..	..	..	..	..	..
27.	Fazilka Municipal Committee	193	19,400	..	..	90,000	..	..	..	..	..
28.	Abchar Municipal Committee	102-61	34,095	..	109,000	45,000	..	..	..	..	..



# STATEMENT C—CONTINUED.

STATEMENT OF URBAN DRAINAGE WORKS FOR THE YEAR ENDING 31ST MARCH 1933—CONTINUED.

Name of Municipality.	GENERAL.						EXPENDITURE.						RECEIPTS.			REMARKS.
	Total inhabited area (in acres).	Population.	Source of water supply.	Approximate average daily quantity of water supplied or used (in gallons).	Quantity of sewage or effluent disposed of daily (in gallons).	Means and methods of disposal of sewage or effluent.	Area under cultivation or sewage, if any (in acres).	Conservancy staff for the upkeep and cleaning of drains and streets.	Cost of repairs and renewal to drains, disposal works, flushing, contingent works, etc.	Cost of lifting or pumping sewage or effluent.	Cost of operation of sewage farm.	Cost of lifting or pumping sewage or effluent.	Other miscellaneous expenses.	Sale proceeds in respect of sewage or effluent or crops.	Any other miscellaneous income due to direct or indirect taxation or other sources in connection with drainage.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
<b>FRIDAYPOT DISTRICT—contd.</b>	Acres.			Gallons.	Gallons.		Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
7. Abohar Notified Area Committee.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8. Bahawal Market Small Town Committee.	8	562	Wells ..	..	..	..	..	200	..	..	..	..	..	7	..	No drainage.
9. O Idarohia Small Town Committee.	211	3,636	Canal water	30,000	..	..	..	3,120	..	..	..	..	..	..	..	..
10. Gurharahat Notified Area Committee.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11. Bharmkot Small Town Committee.	229	6,779	Percolation wells and hand pumps.	4,000	..	..	..	1,824	838	..	..	..	..	..	..	No drainage.
12. Jakhahad Notified Area Committee.	208	7,702	Pipe water	..	..	..	..	2,278	10	..	..	..	..	..	..	No drainage.
<b>LARORE DISTRICT.</b>																
1. Lahore Municipal Committee	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Kasur Municipal Committee ..	1,920	46,815	Percolation wells.	80,000	..	..	..	23,557	2,210	..	..	..	167	3,313	..	55
3. Khem Karn Municipal Committee.	20	6,898	Do.	..	..	..	..	2,458	226	..	..	..	..	6	..	..
4. Chumian Municipal Committee	960	8,269	Do.	41,345	..	..	1.5	3,096	400	..	..	..	..	250	..	370
5. Khundian Small Town Committee.	50	3,184	Do.	1,500	900	..	2	1,142	200	..	..	..	..	..	..	..
6. Pashana Small Town Committee.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7. Patti Municipal Committee ..	153	12,882	Percolation wells and alyssinian tube wells.	..	..	..	..	5,351	1,061	..	..	..	70	77	..	..
8. Pataoli Mandi Small Town Committee.	208	8,616	Deep well and Canal water.	32,000	15,000	..	2	..	340	..	..	..	..	..	..	Scheme has since failed.
9. Bhagwanpur-emb-Jhogwal Small Town Committee.	..	13,814	Percolation wells and alyssinian tube wells.	..	..	..	2	..	..	..	..	..	..	10	..	..



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## STATEMENT C—CONTINUED.

## STATEMENT OF URBAN DRAINAGE WORKS FOR THE YEAR ENDING 31st MARCH 1933—CONTINUED.

Name of Municipality.	GENERAL.							EXPENDITURE.						RECEIPTS.			REMARKS.
	Total inhabited area (in acres).	Population.	Source of water supply.	Approximate average daily quantity of water supplied or used (in gallons).	Quantity of sewage or effluent disposed of daily (in gallons).	Means and methods of disposal of sewage.	Area under cultivation by application of sewage, if any (in acres).	Conservancy staff for the up-keep and cleaning of drains and streets.	Cost of repairs and renewals to drains, disposal works, flushing, installation and other contingent works, etc.	Cost of lifting or pumping sewage.	Cost of operation of sewage farms.	Cost of lifting or pumping sewage.	Other miscellaneous expenses.	Sale proceeds in respect of crops, sewage or effluent.	Any other miscellaneous income due to direct or indirect taxation or other sources in connection with drainage.		
11. Noral Jainmal Singh .. .. .	Acres.	..	..	Gallons.	Gallons.	..	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
12. Qadian .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
SIALKOT DISTRICT.																	
1. Sialkot Municipal Committee	1,490	85,093	Piped water supply from tube-wells.	850,930	..	Disposal tanks and supplied to ramindars	290	49,977	19,265	..	..	..	..	4,064	..	254	
2. Paoor Small Town Committee	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
3. Narowal Small Town Committee.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
4. Daska Small Town Committee	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
5. Janki Small Town Committee	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
6. Zaffarwal Small Town Committee	640	4,102	..	..	..	..	..	718	..	..	..	..	..	561	..	..	
7. Sazbarial Small Town Committee.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
8. Begowala Small Town Committee.	33	4,040	Wells and water pipes.	6,000	..	Thrown outside the town in open fields.	..	407	28	..	..	..	..	..	..	No drainage.	
9. Mittunwal Small Town Committee.	27	3,762	Abyssinian tube-wells.	..	..	..	..	459	..	..	..	..	..	160	..	No drainage.	
10. Bhupabwala Small Town Committee.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
11. Sahowala Small Town Committee.	28	3,244	Percolation wells and abyssinian tube-wells.	10,000	12,000	Discharged into Nullah.	..	..	..	..	..	..	..	151	..	..	
12. Chawinda Small Town Committee.	48	6,411	Percolation wells.	..	..	..	..	1,108	..	..	..	..	..	60	..	No water supply and drainage.	
13. Kahawala Small Town Committee.	..	2,953	..	..	..	..	..	564	448	..	..	..	..	..	..	..	
14. Badonali Small Town Committee.	640	3,880	Percolation wells.	..	..	..	..	..	..	..	..	..	..	..	..	..	
15. Daud Small Town Committee	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
GUJRANWALA DISTRICT.																	
1. Gujranwala Municipal Committee.	3,000	58,716	Wells and hand pumps.	8,80,740	7,04,862	Applied to land after lifting.	100	40,346	2,920	8,684	..	..	17,475	3,889	..	..	



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**STATEMENT C - CONTINUED.**  
**STATEMENT OF URBAN DRAINAGE WORKS FOR THE YEAR ENDING 31st MARCH 1933— CONTINUED.**

Name of Municipality.	GENERAL.						EXPENDITURE.								RECEIPTS.		REMARKS.
	Total inhabited area (in acres).	Population.	Source of water supply.	Approximate average daily quantity of water supplied or used (in gallons).	Quantity of sewage or sewage disposed of daily (in gallons).	Means and methods of disposal of sewage.	Area under "cultivation" by application of sewage, if any (in acres).	Conservancy staff for the up-keep and cleaning of drains and streets.	Cost of repairs and re-novels to drains, dis-posal works, flushing in-station and other contingent works, etc.	Cost of lifting or pump-ing sewage at sewage farm.	Cost of lifting or pump-ing flush water.	Other miscellaneous ex-penses.	Sale proceeds in respect of sewage or crops.	Any other miscellaneous income due to direct or indirect taxation or other sources in connec-tion with drainage.			
1															17		
MONTGOMERY DISTRICT— continued.																	
4. Chichawatia ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
5. Arifwala Municipal Committee	125	2,201	Percussion wells.	38,412	..	Sewage is disposed of by carts.	..	3,150	..	..	..	..	..	..	..		
6. Benala Khurd ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
LYALLPUR DISTRICT.																	
1. Lyallpur Municipal Committee	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
2. Gojra Municipal Committee ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
3. Toba Tek Singh Small Town Committee.	67	5,403	Canal fil-tered water supply.	30,000	..	Sewage is raised by means of per-cussion wheels and applied to land for irrigation.	14	8,065	..	..	..	..	..	5,172	..		
4. Jaranwala Small Town Com-mittee.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
5. Chak Jhumra Small Town Committee.	181	4,094	Filtered Canal water supply.	20,000	19,051	Supplied to land for irrigation.	10	..	..	..	..	..	333	..	..		
6. Tazdhanwala Small Town Committee.	28	6,134	Do.	57,500	30,000	Applied to land for irrigation by lifting Jhalara.	25	7,020	104	360	..	..	975	..	..		
7. Samundri Notified Area Com-mittee.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
8. Kamalia Municipal Committee	137.5	13,220	Percussion wells and abyssinian tube wells.	..	2,500	Sewage water is discharged into big pits outside the abadi.	..	4,273	90	..	..	..	..	..	..		
JHANG DISTRICT.																	
1. Jhang-cum-Maghalana ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
2. Chinot Municipal Committee	..	25,841	Tube wells and wells.	..	..	Sewage from the eastern side of the town is ap-plied to land for irrigation by grav-ity.	3	9,780	297	..	..	..	1,962	..	14		







**STATEMENT C—CONCLUDED.**  
**STATEMENT OF URBAN DRAINAGE WORKS FOR THE YEAR ENDING 31st MARCH 1933—CONCLUDED.**

Name of Municipality.	GENERAL.				EXPENDITURE.								RECEIPTS.			REMARKS.
	Total inhabited area (in acres).	Population.	Source of water supply.	Approximate average daily quantity of water supplied or used (in gallons).	Quantity of sewage or refuse disposed of daily (in gallons).	Means and methods of disposal of sewage.	Area under cultivation by application of sewage, if any (in acres).	Conservancy staff for the up-keep and clearing of drains and streets.	Cost of repairs and re-installation and other contingent works, etc.	Cost of lifting or pumping sewage or sewage farm.	Cost of lifting or pumping flush water.	Other miscellaneous expenses.	Sale proceeds in respect of sewage or refuse or crops.	Any other miscellaneous income due to direct or indirect taxation or other sources in connection with drainage.		
1															17	
MURTAZAGH DISTRICT —continued.																
5. Lohak Municipal Committee ..	Acres.			Gallons.	Gallons.		Acre.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		
6. Kot Ais Municipal Committee.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7. Dairs Din Panah Small Town Committee.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8. Jafel Small Town Committee.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9. Khairpur Small Town Committee.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Saadat ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
DERA GHAKI KHAN DISTRICT.																
1. Dera Ghazi Khan ..	2,489	23,468	Piped water supply from tube wells.	114,196	..	..	..	..	..	..	..	..	..	..	..	No drainage.
2. Jampur Municipal Committee.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Dajal Municipal Committee ..	97	6,186	..	..	..	..	..	1,863	..	..	..	..	..	..	..	No drainage.
4. Mithanval Municipal Committee.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5. Rajanpura Municipal Committee.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6. Kot Chitta Small Town Committee.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7. Tamsa Small Town Committee.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8. Vehos Small Town Committee	54	2,989	Spring water.	..	..	..	..	245	..	..	..	..	..	..	..	No drainage.



## APPENDIX II

PROCEEDINGS OF THE SANITARY BOARD, PUNJAB, DURING THE YEAR  
1933-34.

(FROM APRIL 1ST, 1933, TO MARCH 31ST, 1934.)

THE composition of the Board underwent no change except that Khan Bahadur Dr. K. A. Rahman took over charge of the office of the Secretary, Sanitary Board, Punjab, with effect from the forenoon of 23rd December 1933, *vice* Major R. C. Malhotra, O.B.E., I.M.S., deceased.

Only two meetings of the Board were held during the year. The non-official members continued to take keen interest in the proceedings of the meetings.

Owing to the financial stringency the activities of the Board, in common with other spending departments, were of necessity seriously handicapped.

In April 1933, a sum of Rs. 2,50,430 was placed at the disposal of the Board for grants-in-aid to local bodies in the province (Rs. 1,75,430 for Urban works and Rs. 75,000 for the improvement of rural water-supply of the province).

This sum was utilized and spent as detailed below :—

	Rs.	A.	P.
(1) Bhiwani Water-supply Scheme .. .. .	64,383	4	0
(2) Installation of meters at Rawalpindi Waterworks .. .. .	3,000	0	0
(3) Preparation fee of the project of Drainage improvement and protection of Jhelum town .. .. .	3,846	5	0
(4) Montgomery Drainage Scheme .. .. .	13,500	0	0
(5) Shahpur Sadar Drainage Scheme .. .. .	7,065	0	0
(6) Leh Pollution Prevention Scheme .. .. .	41,513	0	0
(7) Extension of sullage drain at Murree .. .. .	1,601	0	0
Total .. .. .	1,34,908	9	0

*Rural Water-supply.*

	Rs.
(1) Improvement of Gopal Mochan Fair Area Water-supply Scheme .. .. .	3,858
(2) Thal Ilaqa Water-supply extension Scheme .. .. .	10,000
(3) Repairs to pipe line of Thal Ilaqa Water-supply Scheme .. .. .	9,565
(4) Kohala Water-supply Scheme .. .. .	7,954
(5) Improvement of six wells of villages in Naraingrahi Tahsil of Ambala district .. .. .	2,886
(6) Thal Ilaqa Water-supply Extension Scheme .. .. .	32,400
Total .. .. .	66,663

The sum of Rs. 49,000 was surrendered and Rs. 58-7-0 lapsed to Government.

Apart from the above the Board continued to tender advice in regard to the important questions of public health policy and to accord administrative approval to the schemes placed before it.



## APPENDIX III.

LIST OF SANITARY WORKS OF PUBLIC UTILITY CONSTRUCTED BY  
PRIVATE BENEFACTIONS DURING THE YEAR 1933.

## AMBALA DIVISION.

*Hissar*.—A drain for rainwater at Budhlada Mandi by Bhuria Mal-Parmeshwari Das of Mandi Budhlada at a cost of Rs. 455. A well at Budhlada by Shambu Mal, son of Masita Mal, Mahajan, at a cost of Rs. 300. A well at Budhlada by contribution by the people of Mandi Budhlada at a cost of Rs. 500.

A well at Hansi by Ram Chand, son of Chiranji Lal, Mahajan of Hansi, at a cost of Rs. 225.

A hand pump at an existing well in a temple at Hansi, by the Panchayat of Hindus of Hansi, at a cost of Rs. 60. A ghat at Bawani Khara by Mohan Lal, son of Maya Ram, of M. Bawani Khara, Tahsil Hansi, at a cost of Rs. 200. A well at Baliali by Maman, son of Hazari, of M. Baliali, at a cost of Rs. 3,000. Repairs of parapets, platforms on existing wells by Municipal Committee, Sirsa, at a cost of Rs. 170.

*Gurgaon*.—A pucca well in village Islampur by Chhajju, son of Chhuttan, resident of Gharsa, at a cost of Rs. 400. A Dharmshala on the main road leading from Gurgaon Railway Station to Hidayatpur Chhaoni by Lala Shiv Parshad, son of Hardev Sabai, Mahajan of Hidayatpur Chhaoni, at an approximate cost of Rs. 1,000.

*Karnal*.—A well at a cost of Rs. 300 by village common fund at Dholamajra. A well at a cost of Rs. 500 by village and local police officials at Nisang. A parapet at a cost of Rs. 100 by Chaudhri Parmal Singh at Daba. A hand pump at a cost of Rs. 70 by Chaudhri Partap Singh at Palaka.

*Ambala*.—Repairing of an unserviceable well at a cost of Rs. 350 by the people of mohalla Gugamari, Rupar, with a contribution of Rs. 100 from the Municipal Committee, Rupar.

## JULLUNDUR DIVISION.

*Kangra*.—A piped water supply at a cost of Rs. 10,000 by Ramo Shahani, Sud at Pathiar. A well at a cost of Rs. 600 by Ram Saran, Brahmin, of Dhometa at Jagroti. A well at a cost of Rs. 500 by Bhagat Ram, Rajput, of Hadwal, at Badwali. A well at a cost of Rs. 1,400 by Bohgar Ram, Brahmin, at Samkar. A well at a cost of Rs. 200 by Mula Ram, Brahmin, of Dhameta, at Hadwali. A well at a cost of Rs. 200 by Hira, Lohar, at Janot Kalan. A well at a cost of Rs. 200 by Bhagat Ram, Rajput, at Jhonka Ratial. Two Pucca Baolis at a cost of Rs. 1,300 and Rs. 200, each by Hari Ram, Khatri, of Dhameta and Bohgar Ram, Brahmin, of Samkar, respectively, at Polian. A tank at a cost of Rs. 50 by Narad Ghirth of Khatyar, at Katrah. Repair of a spring at a cost of Rs. 150 by Mehru, son of Chhajju Ram, Ahluwalia, at Jaisinghpura. A well with platform at a cost of Rs. 300 and a baoli at a cost of Rs. 400 by Mussammat Barfo, w/o Lachhman, Khatri, of Dhaneta, at Barot and Gharol, respectively. A well and a platform at a cost of Rs. 250 by Tulsi, Brahmin, at Gharo. A well and a platform at a cost of Rs. 400 by Beli, Brahmin, at Jhalerani. A well and a platform at a cost of Rs. 5,000 by Subedar-Major M. Punjab Singh of Phadyar, at Jalari. A well and a platform at a cost of Rs. 500 by Mussammat Lachhmi, w/o Ganga Ram, Mahajan, at Bhalwani. A well and a platform at a cost of Rs. 800 by Prabh Dayal, Brahmin, at Jaghwani. A tank at a cost of Rs. 50 by Sudama, Rajput, at Palata. A baoli at a cost of Rs. 200 by Ram Dayal Rattu of Karhota, at Tanda. A Pucca spring and a Serai at a cost of Rs. 2,500 and Rs. 500, respectively, by Pandit Chuni Lal Dutt, at Chaukhat.

*Hoshiarpur*.—A pucca well at a cost of Rs. 400 by Lala Harblas, son of Radha Krishan, Aggarwal, on the Kacha way from Sham Chaurasi to Hoshiarpur, in village Taragarh. A pucca well at a cost of Rs. 400 by Chaudhri Chhajju Ram, son of Chandu Ram, Carpenter, on Hoshiarpur-Una Road, at village Jahan Khelan. A pucca well at a cost of Rs. 6,000 by the Jats of village Dehlan on the Dehlan-Pir Nagaha road. A pucca well at a cost of Rs. 600 by Chaudhri Sunder, son of Fatta, Saini, in village Ajnoli.

*Jullundur*.—Two pumps at a cost of Rs. 75 each by Lala Mohan Lal and Master Allah Bakhsh at Basti Sheikh. A pump at a cost of Rs. 75 by Lala Nagina Mull in Adda Hoshiarpur, Jullundur City. A pump at a cost of Rs. 75 by Messrs. Kahan Chand and Sons, in Bazar Bhairon, Jullundur. A pump at a cost of Rs. 75 by Mistri Ali Sher on Brandreth Road, Jullundur City. A pump at a cost of Rs. 75 by Sheikh Abdul Aziz, Tahsildar, in Phagwara Gate, Jullundur City. A pump at a cost of Rs. 75 by Abdul Rahim, Barber. A pump at a cost of Rs. 75 by the Mohalladars in Mohalla Kot Muhammad Amin Khan, Jullundur City. Cleaning of wells at a cost of Rs. 34-10-6 by the Municipal Committee, Kartarpur. Construction of four big rooms by Lala Ram Lal, son of Thandu Ram, Khatri, in Hospital Bangah. Two wells at a cost of Rs. 250 each by Lala Ganga Ram, son of Matab Rai and Rikhi Ram, son of Bhagat Ram at Talwan. A well at a cost of Rs. 350 by Chaudhri Abdul Aziz at Malasian. A well at a cost of Rs. 500 by public subscription at Shishwan. Repair of 25 wells at a cost of Rs. 1,500 by the Municipal Committee, Jullundur City. A Water pump at a cost of Rs. 30 by Municipal Committee, Alawalpur. Construction of two parapets at a cost of Rs. 115 by the Municipal Committee, Banga.



*Ludhiana*.—A well at a cost of Rs. 500 by Jan Muhammad, son of Muhammad Azim, on Samrala Road, at Ludhiana. Construction of a parapet on an existing well at a cost of Rs. 200 by Barkat Ram, Thapar, on the Islami High School Road, Ludhiana. A Shiwala at a cost of Rs. 500 by the village residents at Nangal. A gate at a cost of Rs. 2,000 by the village residents at Nagra. A Shiwala at a cost of Rs. 2,500 by the village residents at Bagli Kalan. A Mosque at a cost of Rs. 500 by village residents at Ghawadi. A Gurdwara at a cost of Rs. 3,000 by the village residents at Gujjarwal. Two parapets at a cost of Rs. 100 by village community at Dehlon. Two parapets and 3 hand pumps at a cost of Rs. 15 and Rs. 100, respectively, by the village community at Baddowal. Two hand pumps at a cost of Rs. 46 by village community at Sadhar. Twelve hand pumps at a cost of Rs. 300 by the village community at Dholan. A parapet at a cost of Rs. 100 by the village community at Sahouli. A handpump at a cost of Rs. 35 by the village community at Akalgarh. Two hand pumps at a cost of Rs. 50 by village community at Man. A hand pump at a cost of Rs. 42 by village community at Sidhwan Bet. Six hand pumps at a cost of Rs. 150 by village community at Dakha. A hand pump at a cost of Rs. 40 by village community at Jamalpur. Two hand pumps at a cost of Rs. 55 by village community at Utalan. Ten parapets and a hand pump at a cost of Rs. 516 and Rs. 28, respectively, by village community at Aitiana. A hand pump at a cost of Rs. 40 by village community at Kuliawal. Two hand pumps at a cost of Rs. 65 by the village community at Rattowal. Two hand pumps at a cost of Rs. 78 by village community at Jassowal. A hand pump at a cost of Rs. 30 by village community at Mullanpur. A hand pump at a cost of Rs. 30 by village community at Lilan. A parapet at a cost of Rs. 100 by village community at Jaspal Bangar. Five hand pumps at a cost of Rs. 100 by village community at Chimna. Eight hand pumps at a cost of Rs. 225 by village community at Dewatwal. A parapet at a cost of Rs. 80 by village community at Hissowal. Eight hand pumps at a cost of Rs. 200 by village community at Dhari Pai. A hand pump at a cost of Rs. 27 by village community at Jugiana. A parapet at a cost of Rs. 75 by village community at Rohilan.

*Ferozepore*.—A pump at Aku Mastake Uttar by Balanda, Aku Mastake Uttar at a cost of Rs. 29. A pump at Arifke by Narain Singh, Kambo, at a cost of Rs. 31. A cesspit, parapet, and a platform at Ilmewala by Sardar Ali, Zaildar, at a cost of Rs. 32. A hand pump at Mastake by Qutab Din at a cost of Rs. 28. A pump at Dula Singhwala by Pala Singh, at a cost of Rs. 30. A pump and a cesspit at Dula Singhwala by Wadhawa Singh, at a cost of Rs. 32. A cesspit, parapet, and a platform at Jheta by Arjan Singh, Sufaidposh, Jheta, at a cost of Rs. 120. A pump at Basti Mudh by Chaudhri Muhammad Ali, Mallanwala, at a cost of Rs. 36. A pump at Mallanwala by Chaudhri Muhammad Ali, Mallanwala, at a cost of Rs. 31. A parapet and a platform at Mallanwala by Chaudhri Muhammad Bakhsh, Mallanwala, at a cost of Rs. 13. A pump, a cesspit and a platform at Machi Bugra by Isher Singh, Machi Bugra, at a cost of Rs. 36. A pump, a cesspit, at Mohkamwala, by M. Qadar Bakhsh, at a cost of Rs. 25. A pump and a cesspit at Wara Jaidan by Natha at a cost of Rs. 35.

A pump at Fazilka by few Muhammadans at a cost of Rs. 20. A cattle trough at Abohar by Lala Karam Chand, son of Mangan Ram, of Abohar, at a cost of Rs. 198. A pacca water diggi at Mubki by Lala Guranditta Mal, son of Lala Maya Mall, of Muktsar, at a cost of Rs. 600. A hand pump at Ferozepore City by M. Muhammad Din, Coffee Shop, Ferozepore Arsenal, at a cost of Rs. 40. A hand pump at Ferozepore City by Lala Bali Ram-Keshore Chand, Shopkeepers, at a cost of Rs. 60. A hand pipe at Ferozepore City by Mehr Lakha and Haji Ismail at a cost of Rs. 50. A hand pump at Dharamkot by Lala Mohan Lal, son of Sri Ram, Arora, of Dharamkot, at a cost of Rs. 25.

A pump and a cesspit and a platform at Khaja -Khark by Jawahar Singh at a cost of Rs. 35. A cesspit and a platform at an existing well at Bhadru by Kamal Din, at a cost of Rs. 30. A platform and a parapet at an existing well at Basti Khem Karan by Umar Din at a cost of Rs. 15. A pump at Gokhiwala by Nawab at a cost of Rs. 25. A cesspit and a platform and parapet at an existing well at Kaluwala by Abdullah at a cost of Rs. 44. A platform and a parapet at an existing well at Rakri by Santa Singh, at a cost of Rs. 15. A pump and a platform at an existing well at Suba Qadim by Ismail, at a cost of Rs. 38. A pump at Suba Jadid by Sardar, at a cost of Rs. 25. A pump at Suba Jadid by Rehmat, at a cost of Rs. 25. A platform at an existing well at Suba Jadid by Bagga, at a cost of Rs. 6. A platform and a parapet at an existing well at Sodewala by Amir Bakhsh, at a cost of Rs. 25. A pump, a cesspit at Qabar Wacha by Rikhi Ram, at a cost of Rs. 35. A pump and a cesspit at Qabar Wacha by Sadhu, at a cost of Rs. 35. A pump, a cesspit at Mudki by Mehnga Mal, at a cost of Rs. 35. A pump and a cesspit at Mudki by Khokar Singh, at a cost of Rs. 35. A pump and a cesspit at Kot Karor Khurd by Jhanda Singh, at a cost of Rs. 35. A pump and a cesspit at Kot Karor Khurd by Phuman Singh, at a cost of Rs. 35. A cesspit at Kamalwala by Allah Ditta at a cost of Rs. 6. A cesspit, a platform and a parapet at an existing well at Basti Mudh by Chaudhri Muhammad Ali, Mallanwala, at a cost of Rs. 23. A cesspit at Bholuwala by Narain Singh, at a cost of Rs. 5. A cesspit at Burj Makhan Singh by Lehna, at a cost of Rs. 6. Two pumps at Patli by Narain Singh, at a cost of Rs. 58. Four pumps at Fazilka by Shri Sewak Sabha, Fazilka, at a cost of Rs. 100.



## LAHORE DIVISION.

*Lahore.*—A well at a cost of Rs. 200 by Lala Durga Dass, Handa, in Kucha Handianwala, at Khemkaran. A well with platform at a cost of Rs. 200 by Mistri Barkat Ullah, son of Nawab Din, in Kucha Handianwala, Khemkaran. A well at a cost of Rs. 225 by the Muslim Public in Takia Hazuri Shah, outside Kasuri Gate, Khemkaran. A well at a cost of Rs. 180 by the Muslim Public in Mukhianwali Mosque, near Bullarwali Gate, Khemkaran. A well with platform at a cost of Rs. 175 by Munshi Karam Bakhsh in Nawankot, Khemkaran. A hand pump at a cost of Rs. 75 by Babu Ganda Ram Handa, in his house in Handianwala street, Khemkaran. A well at a cost of Rs. 225 by Bhai Shainkar Singh, Sahukar, within the School ground at Pattoki.

*Amritsar.*—A well at village Baba Bakala by Chaudhri Labhu, Barber, of village Malik-Nangal. Two parapets repaired at village Baba Bakala by public subscription. A parapet repaired at village Kot Saidmahmud by public subscription. A pump at village Kot Saidmahmud by the owner of the well. A pucca drain at village Kot Saidmahmud by public subscription. Two hand pumps at village Fatahpur by S. Budha Singh at a cost of Rs. 60. A parapet of the Rambara well, with 3 tooties and below them a pavement of 18 by 10 feet at village Wadala Khurd by public subscription. A pavement of a street at village Wadala Khurd by public subscription. A manure pit at village Khanpore by S. Bur Singh. Repair of two wells at village Gagarbhana by S. Mula Singh, Lambardar, of Garbhana. Repair of a parapet at village Gagarbhana by public subscription at a cost of Rs. 40. A manure pit at village Gagarbhana by S. Mula Singh, Lambardar. Paving of a street at village Tarpai by public subscription. A pucca drain constructed at Pindori Golla by public subscription. Twenty-six manure pits dug at Pindori Golla by public subscription. A pucca drain constructed at village Bhakhana Kalan by public subscription. A pucca drain constructed at village Varowal Bawgan by Bawa Gurdit Singh, Bawa Gurbachan Rai and Lala Madan Lal, &c. A manure pit dug at Khan Chhabri by one of the villagers. Pavement of a street at village Sarai Amanat Khan by public subscription. Repair of a parapet at village Sehnsara by S. Chanda Singh, Tailor. Pavement of a street at village Sehnsara by public subscription. A parapet at village Makowal by Lala Bishen Dass, Headmaster. Eight hand pumps at village Makowal by the villagers. Forty manure pits dug at village Makowal by public. Five parapets at village Mohan Bhandari by public subscription. Four hand pumps at village Mohan Bhandari by Messrs. Guranditta Mal, Sita Ram and Milkhi Ram. A well at village Kamalpur by S. Shian Singh, son of S. Lall Singh, at a cost of Rs. 150. A well at village Kamalpur by Chaudhri Kharait Ullah, Arain, at a cost of Rs. 150. A pucca drain constructed at village Kamalpur by Lala Baldev Raj at a cost of Rs. 120. A well at Amritsar town, Lawrence Road, by Lala Sain Das, House Agent, at a cost of Rs. 1,000.

*Gurdaspur.*—Ten hand pumps for water supply at Dhariwal, Tahsil Gurdaspur, by New Egerton Woolen Mills, Dhariwal, Tahsil Gurdaspur, at a cost of Rs. 500. A pucca drain and one bath room at village Chhichharia, Tahsil Batala, by Khan Muhammad Nawaz Khan, Zaildar, at a cost of Rs. 85. Fitting of a water pump at School in village Aliwal, by village community of village Aliwal, Tahsil Batala, at a cost of Rs. 25. A water pump at village Bhagowala, Tahsil Batala, by village community of village Bhagowala, at a cost of Rs. 35. A well at village Wadala Granthian, Tahsil Batala, by Pandit Amar Nath of village Bholeki, in Batala Tahsil, at a cost of Rs. 80.

*Sialkot.*—A hand pump at a cost of Rs. 50 by Lala Durga Dass, Mahajan, son of Pahoo Mull, at Zaffarwal. A drinking water well at a cost of Rs. 200 by private contributions raised by the headmaster, New Middle School, Goindke, in school compound. A parapet to the existing well at a cost of Rs. 200 by subscription raised by the headmaster and Red Cross Funds at Middle School, Gota. A hand pump at a cost of Rs. 35 by subscriptions raised by the headmaster and Red Cross Funds in the compound of Mara School. Construction of a drainage and pavements of certain streets at a cost of Rs. 653-12-0 by subscription raised by the villagers at Dhanawali. A hand pump at a cost of Rs. 120 by Bana, son of Mohna, Barber, Kucha Mashkian, in Tibba Kakezian, at Sialkot. A well at a cost of Rs. 600 by Lala Gopal Chand, Jain, on Artillery Road, Sialkot. A well at a cost of Rs. 600 by Khan Sahib Haji Muhammad Ali, Executive Engineer, retired, on Abbott Road, Sialkot.

*Gujranwala.*—Construction of drains at a cost of Rs. 700 by the inhabitants at Jalalpur-Bhattian. Construction of drains at a cost of Rs. 400 by the Zamindars at Rampur (Tahsil Hafizabad). Construction of new drains and repairs to old ones and cleaning of village Kot Nakka at a cost of Rs. 200 by Lala Charan Dass and his brothers Devi Dayal and Jawahar Singh. Cleaning of village and construction of drains at a cost of Rs. 100 by Lala Ishar Dass, Sahukar, at Kaleki.

*Sheikhpura.*—A hand pump at a cost of Rs. 60 by Lala Mangat Ram, son of Lala Karam Chand, Arora, in Chouk Bazar, Shahkot. A hand pump at a cost of Rs. 60 by S. Gurmukh Singh, son of Ganda Mall, Goldsmith, in Manawala Bazar, Shahkot.

## RAWALPINDI DIVISION.

*Gujrat.*—A water pump with parapet at a cost of Rs. 60 by Moula Singh of Sohawa on Sohawa-Kuthala Sheikhan Road. A water pump at a cost of Rs. 50 by B. Haveli Ram of Saida on Phalia-Qadirabad Road. A water pump at a cost of Rs. 50 by S. Mohan Singh of Mandi Baha-ud-Din on Mandi Baha-ud-Din-Phalia Road. A water pump at a cost of Rs. 50



by Narain, Bazigar, on Kuthala Sheikhan-Miani Road. A well at a cost of Rs. 200 by Harnam Singh at Pindi Lala. A water pump at a cost of Rs. 50 by Khalil Ahmed on Kuthala Sheikhan-Bukkan Road, near village Bukkan. A water pump at a cost of Rs. 50 by Tongawalas near Kuthala Sheikhan. A water pump at a cost of Rs. 50 by Ghulam Rasul at Mangat. Cleaning of a well at a cost of Rs. 30-2-0 by the District Board, Gujrat.

*Shahpur.*—A hand pump at Bhalwal near gate of grain mandi by Lala Lakhmi Das, Talwar, shopkeeper, grain market, Bhalwal, at a cost of Rs. 48. A hand pump at Bhalwal, near Waterworks by Lala Des Raj, son of Shankar Das and Ram Saran Das, son of Sakhir Chand, shopkeeper, of grain market, Bhalwal, at a cost of Rs. 41. A hand pump at Bhalwal centre, of Bhalwal by Lala Gurdas Ram, Malhaura, shopkeeper, Bhalwal, at a cost of Rs. 38. A hand pump at Bhalwal, near his own shop in the bazar by Dr. Mangal Sain, Bhatia, Medical Practitioner of Bhalwal, at a cost of Rs. 26-12-0. A hand pump at Bhalwal, near gate of Grain Mandi close to Sanatan Dharam Mandar by Lala Mangat Ram, Paladar (labourer) of Bhalwal, at a cost of Rs. 41. A hand pump at Miani centre, of Pakhowal Bazar by Lala Harmandar Lal of Miani. A handpump at Miani, at the end of the Municipal road, outside the Chinoti Gate by Lala Jagat Ram, of Miani. A hand pump at Jhawarian at the side of Shahpur road, near Tarkhanwala well, by Lala Ganesh Das, son of Lala Ganga Ram, Arora, of Jhawarian, at a cost of Rs. 83. A hand pump at Sahiwal, in the compound of Municipal dispensary by Lala Kundan Lal Vasudev, Honorary Magistrate, of Sahiwal, at a cost of Rs. 60. A hand pump at Shahpur City at the side of the Kacha road by Lala Sant Ram, son of Lala Ganesh Das, Arora, of Shahpur City, at a cost of Rs. 50. A drinking well at mile 4 of Bhalwal-Kot Moman Road by Lala Chuni Lal of Lalian, at a cost of Rs. 250. A hand pump at Sargodha near shop of Lala Roshan Lal, watchmaker, in the Kutchery Bazar, by general public of Sargodha, at a cost of Rs. 40. A hand pump at Sargodha, in Kutchery Bazar, near Gol Hawk, by Lala Amar Lal, Wadhawan, Cycle Merchant of Sargodha, at a cost of Rs. 40. A hand pump at Sargodha on road between blocks No. 2 and 19 by Lala Radha Kishen of Sargodha, at a cost of Rs. 40.

*Jhelum.*—A well at a cost of Rs. 300 by Lakhmi Dass, Contractor, at Dharyala Jalap.

*Rawalpindi.*—A well at a cost of Rs. 700 by Allah Ditta, Faqir Muhammad and Ghulam Rasool, sons of Karam Din, at Dhok Badhal. A well at a cost of Rs. 700 by Roda, at Tabkian. A well at a cost of Rs. 500 by Khuda Dad Khan, Zaildar, at Golra. A well at a cost of Rs. 500 by Faiz Zaman, at Jhaliari. A well at a cost of Rs. 500 by Allah Ditta Khan, Zaildar, at Kala Bhadda. A well at a cost of Rs. 500 by Farman Ali at Jhaliari Bhai Khan. A well at a cost of Rs. 400 by Muhammad Khan, son of Qaim Din, at Nigal Umar Khan. A well at a cost of Rs. 200 by Shah Nur Hussain at Banth.

*Attock.*—A well at a cost of Rs. 500 by pensioner Hawildar Kaim, son of Khalas, Awan, on Tallagang-Murat Road. A water pump at a cost of Rs. 200 by Lala Narain Dass, son of Chet Ram, in the compound of Sub-Divisional Officer's Court, at Pindi Gheb.

*Mianwali.*—A well at a cost of Rs. 900 by Lala Hem Raj, Passari, at Mianwali, near the road leading to Shahbazkhel. Two small wells and a hand pump at a cost of Rs. 160 and Rs. 60, respectively, by three persons at Mianwali. A well at a cost of Rs. 25 by Pandit Mohan Lal in Wandha Sarwar Khelanwala in Mianwali Tahsil.

#### MULTAN DIVISION.

*Montgomery.*—A well at a cost of Rs. 350 by Nur Muhammad, Lumberdar, at Chak No. 31/11-L. A well at a cost of Rs. 500 by Muhammad Amin at Ghate Phakni. A well at a cost of Rs. 500 by Mangat Ram at Shergharh. A well at a cost of Rs. 400 by Radha Singh, at Chak No. 51-S.P. A well at a cost of Rs. 1,000 by Sajwara, son of Hashim, at Chak No. 277-E.B. A well at a cost of Rs. 750 by Khan Sahib Murad Ali Khan, at Chak No. 193-14-L. A parapet at a cost of Rs. 20 by Karam Chand at Hassu ke Dhaun. Repairing of a parapet on a well at a cost of Rs. 2 by Nau Nihal Singh at Hassu ke Dhaun. Two hand pumps at a cost of Rs. 300 by Muhammad Shafi and Rang Ali, Faqir, at Chak No. 92/6-R. A hand pump at a cost of Rs. 125 by Chaudhri Sultan Ahmad, Zaildar, at Chak No. 82/6-R. A hand pump at a cost of Rs. 100 by Sunder Dass at Chak No. 22-G.D.

*Lyallpur.*—A well at a cost of Rs. 300 by S. Mehnga Singh in school compound of Chak No. 99-R.B. A well at a cost of Rs. 300 by public subscription in school compound of Chak No. 435-G.B. A well at a cost of Rs. 300 by public subscription in school compound of Chak No. 494-G.B. A well at a cost of Rs. 300 by public subscription in school compound of Chak No. 530-G.B. Two hand pumps at a cost of Rs. 148 by District Board, Lyallpur, in the District Board Rest-Houses, at Dijkot and Samundri. Repairs to wells at a cost of Rs. 200, Rs. 250 and Rs. 300, by grant from Killa Gift Fund through District Rural Community Council at villages Chak No. 140-G.B., 323-J.B. and 118-G.B., respectively. Four wells at a cost of Rs. 500 by Rs. 350, Rs. 400 and Rs. 500 by grant from Killa Gift Fund through District Rural Community Council at villages Chak No. 328-G.B., 165-R.B., 379-J.B. and 508-G.B., respectively. Two wells at a cost of Rs. 1,250 by grant from Killa Gift Fund at Chak No. 424-J.B. Four wells at a cost of Rs. 1,000, Rs. 400, Rs. 500, and Rs. 500, by grant from Killa Gift Fund at villages Chak No. 415-G.B., 72-R.B., 187-R.B. and 309-J.B., respectively. Repairs to a well at a cost of Rs. 100 by grant from Killa Gift Fund at Samundri-Tandlianwala Road, near Chak No. 441-G.B. Repairs to wells at a cost of Rs. 150, Rs. 100, Rs. 150, Rs. 130, Rs. 200 and Rs. 200 from Killa Gift Fund at villages Chak No. 42-G.B., 384-G.B., 156-R.B., 285-J.B., 431-J.B. and 314-J.B., respectively. A



hand pump at a cost of Rs. 70 by Miran Bakhsh, Blacksmith, of Kamalia, at Gojra. A well at a cost of Rs. 1,941-7-0 by Municipal Committee, Gojra, at Gojra. A bathing Chobacha at a cost of Rs. 60 by Mehta Karam Narain and Hans Raj of Kamalia, at Chak Tangranwala. Construction of bath rooms and fitting of electric motor on the well outside Karkhana Bazar at a cost of Rs. 1,455 by the Municipal Committee, Lyallpur, at Lyallpur.

*Jhang.*—A hand pump at a cost of Rs. 50 by Muhammad Niwaz Khan, son of K. Haq Niwaz Khan, Dab, in the bazar of village Dab Kalan. A hand pump at a cost of Rs. 50 by F. Muhammad Rashid, Sajjada Nashin of Shah Sadiq Nihang, on Jhang-Shorkot Road. A hand pump at a cost of Rs. 40 by Lala Gur Sahai, caste Vij Khatri, of Rajoa, on Rajoa-Chiniot Road.

*Multan.*—A well at a cost of Rs. 500 by Mehr Kuram and Farid, sons of Ahmed, caste Jat Mehar, on Multan-Lahore Road. A water pump at a cost of Rs. 65 by Chuudhri Khan Chand, Zamindar, in the school compound. A well at a cost of Rs. 500 by Imam Din and Fazal Din, sons of Budha, on Serai Sidhu-Kabirwala Road. A hand pump at a cost of Rs. 80 by Chhotu Ram of Multan City, at Punjab Ice Factory Company, Multan Cantonment Station Road. A hand pump at a cost of Rs. 80 by Muhammadan Panchayat of Multan City, at Katchery Road, Multan City. A hand pump at a cost of Rs. 100 by Hindu Panchayat, at Dharmal Jandi Sochan, Multan City. A well at a cost of Rs. 1,000 by Muhammadan Panchayat at Kup Khalri Khuh, Multan City. A hand pump at a cost of Rs. 110 by Krishan Dass of Jamrani Wah at Kahrur Pucca Railway Station. A hand pump at a cost of Rs. 110 by Krishan Dass of Mauza Jamrani Wah, at Mauza Alipore Kanjuh on Kahrur Dunyapur Road. A well at a cost of Rs. 700 by Muhammadan Panchayat in the mosque at Burewala. A well at a cost of Rs. 700 by Hindu Panchayat in Arya Samaj Mandir, Burewala. A well at a cost of Rs. 700 by Hindu and Sikh Public in cemetery at Burewala town. A well at a cost of Rs. 1,500 by Singh Sabha at Khalsa High School, Khanewal. A hand pump at a cost of Rs. 40 by Bawa Sewa Dass, Udasi, at Jalalpur-Pirwala. A hand pump at a cost of Rs. 32 by Khuda Bakhsh, Lambardar, in village Bate Ketch.



## APPENDIX IV.

STATEMENT SHOWING THE DEATH RATES FROM CHOLERA, SMALLPOX, FEVER AND DYSENTERY AND DIARRHEA FOR THE FIVE YEARS PRECEDING AND FOR THE PERIOD SINCE THE INTRODUCTION OF DRAINAGE OR WATER-SUPPLY OR BOTH IN THE UNDERMENTIONED TOWNS.

Towns.	DATE OF COMPLETION OF WORKS OF		AVERAGE ANNUAL DEATH-RATE SINCE THE INTRODUCTION OF DRAINAGE OR WATER-SUPPLY OR BOTH.					AVERAGE ANNUAL DEATH-RATE FOR THE FIVE YEARS PERIOD PRECEDING THE INTRODUCTION OF DRAINAGE OR WATER-SUPPLY OR BOTH.					REMARKS.
	Drainage.	Water-supply.	Cholera.	Small-pox.	Fever.	Dysentery and diarrhoea.	Cholera.	Small-pox.	Fever.	Dysentery and diarrhoea.			
1	2	3	4	5	6	7	8	9	10	11	12		
Bohtak	1923	1931	0.20	0.29	12.21	1.01	0.5	0.3	27.7	1.2			
Bewari	..	1920	0.29	0.17	7.35	1.54	0.4	0.4	8.5	3.2			
Ambala	..	1895	0.37	0.39	11.96	2.72	0.5	0.4	19.3	6.4			
Kalka	..	1890	0.32	0.12	13.25	1.92	1.7	0.2	15.2	3.9			
Simla	1893	1893	0.02	0.32	11.07	0.99	..	1.1	17.1	1.4			
Dharansala	..	1908	0.43	0.08	9.31	1.77	0.3	..	6.1	1.6			
Hochiarpur	1925	..	0.62	0.58	10.99	1.05	0.2	0.7	9.5	0.1			
Jullunder	1924	..	0.20	0.31	10.83	2.18	0.4	0.2	11.9	2.3			
Leclhiana	1895	1909	0.22	0.78	14.42	2.01	0.4	2.7	20.8	1.6			
Jagraon	..	..	0.39	0.96	12.11	1.40	0.6	1.5	9.3	2.0			
Ferozepore	1916	..	0.41	0.49	11.00	1.46	0.2	0.7	9.8	1.1			
Zira	1913	..	0.72	1.02	16.92	0.78	0.3	4.0	16.6	0.9			
Fazilka	1913	..	0.71	0.94	19.74	1.51	2.2	2.6	21.4	1.7			
Muktesar	..	1925	0.05	1.75	11.18	0.96	0.04	0.04	11.3	1.1			
Abchar	..	1929	..	0.38	5.91	0.35	..	1.1	7.8	1.1			
Lahore	1921	1881	0.22	0.91	11.39	1.83	0.2	0.6	20.0	1.3			
Kasur	1922	..	1.50	0.28	12.75	1.22	1.6	1.0	21.8	1.0			
Anritsar	1885	1904	0.46	0.85	20.27	1.43	0.4	0.7	31.3	1.8			
Jandiala	1924	..	0.49	0.62	15.95	1.27	0.03	1.0	17.1	0.7			
Gurdaspur	1918	..	0.17	0.40	14.25	2.14	0.6	0.3	14.2	3.1			
Dalbousie	..	1894	0.03	0.05	10.25	1.51	..	..	9.6	2.4			
Pathankot	1915	..	0.97	0.39	17.11	2.57	0.8	0.7	12.4	2.8			
Sialkot	..	1915	0.46	0.36	12.97	2.03	3.0	1.2	9.6	2.3			
Gujranwala	1892	..	0.49	0.94	17.73	..	0.5	0.6	19.7	1.7			
Sargala	..	1924	0.07	0.44	3.21	0.17	10.4	1.1	7.1	0.2			
Gujrat	1906	..	0.63	0.28	18.27	1.62	0.3	0.2	16.9	1.9			
Bherra	1917	..	0.18	0.92	18.96	1.82	0.03	0.7	17.8	1.7			
Sargodha	1907	..	0.07	0.39	6.49	1.13	..	Not available.	..	..			
Khushab	1923	1923	0.02	0.87	13.80	1.51	0.1	0.3	14.3	1.6			
Jhelum	..	..	0.33	0.42	11.77	1.37	1.5	0.3	14.0	2.1			
Pind Dadan Khan	1909	..	0.36	0.89	19.33	2.23	1.1	0.7	23.1	3.6			
Rawalpindi	1907	..	0.52	0.35	17.27	2.11	0.5	0.1	16.4	3.4			
Murree	..	1894	0.06	0.08	14.33	1.50	0.7	0.4	14.8	0.9			
Mianwali	..	1904	0.12	0.37	16.34	1.39	..	Not available.	..	..			
Lyalpur	1904	1904	0.08	0.73	10.22	0.63	*2.8	*0.4	*16.3	*2.1			
Gojra	1916	..	0.10	0.39	6.80	0.56	..	..	10.5	..			
Tandlianwala	1924	..	0.08	0.53	6.39	0.23	0.8	0.8	4.6	..			
Toba Tek Singh	1920	1914	..	0.11	2.40	0.07	..	..	(a) 4.6	(a) 0.4			
Jaranwala	1918	1913	0.01	0.04	2.66	0.10	0.01	Not available.	..	..			
Multan	1907	1928	0.001	0.06	2.18	0.98	0.01	1.0	14.7	2.0			
Shujabad	1922	..	0.04	0.43	19.74	1.69	0.7	1.1	31.1	2.9			
Dera Ghazi Khan	..	1913	0.02	0.26	14.76	2.21	2.0	0.6	15.9	1.6			

\*Figures available for four years only.

†Figures available for two years only.

(a) Figures available for three years only.



## APPENDIX V.

MEAN MONTHLY TEMPERATURE AND DEPARTURE FROM NORMAL RECORDED AT 13 METEOROLOGICAL STATIONS IN THE PUNJAB INCLUDING DELHI DURING THE YEAR 1933.

Serial No.	Station.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.		JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
		M. T.	Dep.	M. T.	Dep.	M. T.	Dep.	M. T.	Dep.	M. T.	Dep.	M. T.	Dep.	M. T.	Dep.	M. T.	Dep.	M. T.	Dep.	M. T.	Dep.	M. T.	Dep.	M. T.	Dep.
1	Delhi	46.9	-4.1	56.9	+1.6	67.8	+1.4	77.8	-1.3	82.9	-4.1	87.1	-1.6	83.5	-1.4	80.8	-2.3	79.7	-1.6	73.8	0	61.8	0	53.0	+0.7
2	Hansi	42.5	..	50.9	..	66.4	..	77.7	..	85.4	..	90.7	..	86.9	..	82.5	..	79.9	..	74.7	..	62.1	..	51.6	..
3	Hissar	44.2	-2.7	53.7	+1.6	67.1	+2.5	76.5	-2.2	84.9	-3.9	89.0	-2.1	86.0	-1.3	81.9	-3.7	80.9	-1.7	73.6	+0.7	61.2	+2.1	51.0	+2.9
4	Ambala	45.6	-1.8	54.0	+2.1	62.2	-0.4	74.1	-0.8	83.6	-1.6	88.6	+1.8	82.5	-1.0	81.3	-0.5	78.3	-1.1	70.3	+0.2	56.3	-0.6	48.9	+1.3
5	Ludhiana	43.5	-3.6	54.4	+2.9	62.3	-0.4	74.3	-1.6	83.6	-2.1	90.7	+2.6	85.3	+0.5	81.8	-1.3	79.3	-1.0	72.4	+1.5	59.0	+1.2	49.7	+1.8
6	Lahore	41.7	-3.2	53.3	+3.1	62.4	+0.3	73.7	-1.4	85.2	-0.8	91.4	+1.7	86.5	-0.5	82.2	-2.9	80.6	-1.1	73.5	+3.0	58.2	+2.2	48.7	+3.5
7	Sialkot	41.7	-5.1	51.3	+0.5	59.7	+1.8	71.2	-3.3	83.3	-2.5	90.0	+0.6	84.0	-1.4	80.5	-2.5	78.1	-2.0	71.0	+0.8	57.5	+0.7	48.5	+1.3
8	Rawalpindi	38.9	-3.4	48.5	+1.9	58.1	+0.5	66.7	-3.4	83.3	+0.6	90.2	+2.1	85.2	+0.7	79.9	-1.7	79.1	+1.5	69.8	+2.9	53.4	+1.1	43.9	+1.3
9	Khushab	44.7	-1.2	53.7	+2.5	64.8	+1.1	76.9	-0.5	86.5	-2.6	93.8	+2.0	87.7	-0.9	82.8	-3.5	80.5	-2.9	69.0	-4.6	54.2	-4.6	45.4	-1.9
10	Lyalpur	44.6	0	52.8	+3.3	63.2	+1.9	74.0	+0.3	86.4	+0.2	92.1	+1.7	88.6	+0.4	83.2	-2.1	82.1	0	74.6	+2.9	62.2	+5.8	51.3	+6.0
11	Montgomery	43.3	-3.5	53.9	+0.7	63.0	-2.0	72.7	-6.5	84.5	-5.8	90.4	-2.7	87.5	-2.5	82.2	-5.5	81.3	-3.6	73.2	-2.5	59.4	-1.8	49.0	+0.3
12	Multan	46.7	-1.7	55.5	+2.4	64.6	+0.1	74.8	-3.0	86.8	-1.5	92.7	+1.0	90.9	+1.0	85.9	-1.2	83.7	-0.3	74.9	+1.1	64.1	+3.1	54.3	+4.0
13	Khanpur	43.4	..	53.7	..	66.0	..	76.2	..	87.3	..	89.1	..	87.7	..	84.9	..	83.9	..	74.6	..	61.2	..	51.1	..



## APPENDIX V—CONTINUED.

MEAN MONTHLY RELATIVE HUMIDITY AND DEPARTURE FROM NORMAL RECORDED AT 13 METEOROLOGICAL STATIONS IN THE PUNJAB INCLUDING DELHI DURING THE YEAR 1933.

Serial No.	Station.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.		JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
		R.H.	Dep.	R.H.	Dep.	R.H.	Dep.	R.H.	Dep.	R.H.	Dep.	R.H.	Dep.	R.H.	Dep.	R.H.	Dep.	R.H.	Dep.	R.H.	Dep.	R.H.	Dep.	R.H.	Dep.
1	Delhi	55	..	58	..	47	..	38	..	56	..	58	..	81	..	87	..	87	..	68	..	63	..	80	..
2	Hansi	..	..	70	..	48	..	43	..	51	..	52	..	70	..	83	..	84	..	64	..	61	..	76	..
3	Hissar	56	-19	64	-6	46	-11	43	+1	52	+14	66	+16	74	+8	83	+13	81	+15	61	+8	55	-5	72	+2
4	Ambala	72	-13	67	-11	59	-4	38	-10	43	0	50	-9	81	+2	85	+1	86	+7	71	+3	75	+2	85	+5
5	Luadhiana	79	-3	71	-5	66	+4	43	-3	46	+7	49	-3	76	+4	85	+7	84	+10	60	+8	68	-3	85	+9
6	Lahore	87	+4	73	-1	59	+1	49	+5	44	+8	48	+1	72	+5	85	+13	83	+18	63	+11	76	+16	92	+11
7	Sialkot	96	+8	83	0	71	+2	51	0	50	+8	50	+1	83	+8	91	+8	89	+13	71	+5	78	+3	92	+5
8	Rawalpindi	78	-4	71	-7	58	-11	50	-6	35	-6	36	-9	69	+1	81	+4	68	-1	50	-9	57	-8	80	+5
9	Khushab	56	-12	52	-14	44	-12	35	-8	40	+6	44	+2	71	+8	81	+12	78	+17	59	+13	59	+8	68	+8
10	Lyallpur	61	-21	63	-13	55	-9	43	-5	40	+2	42	-5	64	0	81	+10	73	+8	53	-6	59	-9	76	-4
11	Montgomery	75	+2	74	+7	62	+7	56	+13	45	+6	49	+3	67	+4	83	+14	74	+11	56	+1	68	+9	85	+13
12	Multan	58	-13	62	-4	58	0	48	0	50	+7	55	+4	65	+1	76	+7	69	+4	60	+4	62	+2	65	-1
13	Khanpur	59	..	58	..	47	..	45	..	44	..	59	..	69	..	72	..	66	..	53	..	58	..	72	..



APPENDIX V—CONCLUDED.

MEAN MONTHLY RAINFALL AND DEPARTURE FROM NORMAL RECORDED AT 13 METEOROLOGICAL STATIONS IN THE PUNJAB INCLUDING DELHI DURING THE YEAR 1933.

Serial No.	Station.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.		JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
		A.R.	Dep.	A.R.	Dep.	A.R.	Dep.	A.R.	Dep.	A.R.	Dep.	A.R.	Dep.	A.R.	Dep.	A.R.	Dep.	A.R.	Dep.	A.R.	Dep.	A.R.	Dep.	A.R.	Dep.
1	Delhi	0.06	-0.98	0.66	-0.10	0.26	-0.26	0.02	-0.37	2.11	+1.53	+15.67	+12.08	5.12	-2.41	21.71	+14.29	13.46	+8.68	1.28	+0.96	0	-0.11	0.01	-0.39
2	Bahawalpur	0.02	..	0.42	..	0.23	..	0.15	..	1.55	..	1.07	..	3.41	..	9.70	..	11.90	..	0	..	0	..	0	..
3	Bissau	0.02	-0.69	0.78	+0.43	0.51	+0.09	0.30	-0.09	1.58	+0.99	0.27	-1.37	2.70	-1.06	9.37	+5.75	9.27	+6.91	0.07	-0.24	0.03	0	0.04	-0.25
4	Ambedkar	0.03	-1.46	3.47	+1.82	1.94	+1.04	0.80	+0.22	1.69	+0.82	3.14	-0.61	23.27	+15.92	21.39	+13.69	22.40	+17.80	2.23	+1.48	0.08	-0.20	0.18	-0.39
5	Lyallpur	0.50	-1.22	0.64	-0.65	1.32	+0.26	0.14	-0.71	0.49	-0.15	5.05	+2.52	4.02	-4.18	12.13	+5.19	11.12	+6.88	0.33	+0.05	0.13	+0.02	0	-0.65
6	Lahore	0.06	-0.99	0.13	-0.81	0.79	-0.07	0.71	+0.17	0.17	-0.53	1.21	-0.47	3.70	-1.78	9.38	+4.05	3.09	+0.73	0	-0.25	0.36	+0.20	0	-0.36
7	Sialkot	0.50	-1.61	0.69	-0.99	2.14	+0.56	0.33	-0.61	1.21	+0.08	2.30	-0.16	11.87	+4.01	14.73	+5.82	5.91	+2.54	0.19	-0.11	0.30	+0.19	0.01	-0.65
8	Rawalpindi	1.56	-0.93	1.69	-0.50	2.89	+0.45	2.10	+0.16	2.29	+0.95	3.95	+1.71	10.85	+3.20	8.58	-0.56	2.46	-1.00	0.04	-0.47	0.24	-0.02	0	-1.10
9	Khushab	0.15	-0.62	0.16	-0.73	1.18	+0.03	0.33	-0.72	0.95	+0.16	1.02	+0.25	4.46	+0.82	10.71	+7.49	1.87	+0.56	0	-0.17	0	-0.08	0	-0.45
10	Lyallpur	0.01	-0.42	0	-0.34	0.54	+0.04	0.21	-0.36	0.61	+0.12	1.00	-0.14	2.87	-0.15	7.08	+2.84	2.20	+0.51	0	-0.24	0	-0.16	0.02	-0.31
11	Montgomery	0.01	-0.55	0.13	-0.33	0.17	-0.32	0.15	-0.21	0.53	+0.18	0.78	-0.10	1.04	-1.18	9.99	+6.71	0.55	-0.98	0	-0.06	0	-0.07	0.04	-0.26
12	Multan	0.17	-0.25	0.20	-0.16	0.04	-0.39	0.13	-0.14	0.18	-0.17	0.02	-0.60	0.36	-1.66	2.13	+0.15	3.36	+2.95	0	-0.05	0	-0.07	0.15	-0.07
13	Khairpur	0.04	-0.52	0	-0.09	0.10	-0.25	0.07	-0.25	0.31	+0.11	0	-0.34	2.36	-0.12	3.76	+2.06	0.60	+0.48	0	0	0	-0.21	0.22	+0.18



# APPENDIX VI (A).

TABLE SHOWING HEALTH SERVICES IN RURAL AND URBAN AREAS OF THE PUNJAB DURING THE YEAR 1933.

RURAL AREAS.										URBAN AREAS.										
DISTRICTS.	MEDICAL OFFICERS OF HEALTH.				Epidemic staff.	Sanitary and Health Inspectors.	VACCINATORS.		School Medical Officers.	Other Health Staffs.	MEDICAL OFFICERS OF HEALTH.				Sanitary and Health Inspectors.	VACCINATORS.		Inspectors of Vaccination.	School Medical Officers.	Other Health Staffs.
	Holding D.P.H.		Licentiates (L.P.H.S.).				Males.	Females.			Holding D.P.H.		Licentiates (L.P.H.S.).			Males.	Females.			
	Whole-time.	Part-time.	Whole-time.	Part-time.							Whole-time.	Part-time.	Whole-time.	Part-time.						
1	28	..	..	..	431	43	333	..	..	43	12	..	116	132	8	8	6	5	28	..
Hissar .. .. .	1	..	..	..	..	..	18	..	..	1	..	..	3	..	..	..	..	..	..	..
Rohtak .. .. .	1	..	..	..	..	..	14	..	..	..	..	..	..	..	..	..	..	..	..	..
Gurgaon .. .. .	1	..	..	..	..	..	17	..	..	..	..	..	..	..	..	..	..	..	..	..
Karnal .. .. .	1	..	..	..	..	..	15	..	..	..	..	..	..	..	..	..	..	..	..	..
Ambala .. .. .	1	..	..	..	..	..	14	..	..	..	..	..	..	..	..	..	..	..	..	..
Simla .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Kangra .. .. .	1	..	..	..	..	..	14	..	..	..	..	..	..	..	..	..	..	..	..	..
Hoshiarpur .. .. .	1	..	..	..	..	..	14	..	..	..	..	..	..	..	..	..	..	..	..	..
Jullundur .. .. .	1	..	..	..	..	..	15	..	..	..	..	..	..	..	..	..	..	..	..	..
Ludhiana .. .. .	1	..	..	..	..	..	13	..	..	..	..	..	..	..	..	..	..	..	..	..
Ferozepore .. .. .	1	..	..	..	..	..	19	..	..	..	..	..	..	..	..	..	..	..	..	..
Lahore .. .. .	1	..	..	..	..	..	16	..	..	..	..	..	..	..	..	..	..	..	..	..
Anritsar .. .. .	1	..	..	..	..	..	17	..	..	..	..	..	..	..	..	..	..	..	..	..
Gurdaspur .. .. .	1	..	..	..	..	..	17	..	..	..	..	..	..	..	..	..	..	..	..	..
Sialkot .. .. .	1	..	..	..	..	..	16	..	..	..	..	..	..	..	..	..	..	..	..	..
Gufranwala .. .. .	1	..	..	..	..	..	16	..	..	..	..	..	..	..	..	..	..	..	..	..
Sheikhupura .. .. .	1	..	..	..	..	..	15	..	..	..	..	..	..	..	..	..	..	..	..	..
Gujrat .. .. .	1	..	..	..	..	..	16	..	..	..	..	..	..	..	..	..	..	..	..	..
Shahpur .. .. .	1	..	..	..	..	..	18	..	..	..	..	..	..	..	..	..	..	..	..	..
Jhelum .. .. .	1	..	..	..	..	..	10	..	..	..	..	..	..	..	..	..	..	..	..	..
Rawalpindi .. .. .	1	..	..	..	..	..	13	..	..	..	..	..	..	..	..	..	..	..	..	..
Attock .. .. .	1	..	..	..	..	..	13	..	..	..	..	..	..	..	..	..	..	..	..	..
Manwali .. .. .	1	..	..	..	..	..	7	..	..	..	..	..	..	..	..	..	..	..	..	..
Montgomery .. .. .	1	..	..	..	..	..	38	..	..	..	..	..	..	..	..	..	..	..	..	..
Lyallpur .. .. .	1	..	..	..	..	..	20	..	..	..	..	..	..	..	..	..	..	..	..	..
Jhang .. .. .	1	..	..	..	..	..	13	..	..	..	..	..	..	..	..	..	..	..	..	..
Multan .. .. .	1	..	..	..	..	..	22	..	..	..	..	..	..	..	..	..	..	..	..	..
Muzaffargarh .. .. .	1	..	..	..	..	..	11	..	..	..	..	..	..	..	..	..	..	..	..	..
Dera Ghazi Khan .. .. .	1	..	..	..	..	..	12	..	..	..	..	..	..	..	..	..	..	..	..	..
Total .. .. .	28	..	..	..	431	43	333	..	..	43	12	..	116	132	8	8	6	5	28	..

\*This column should not include officers already noted in the columns 2-5 nor should it include persons, coolies and menials such as sweepers, &c.

†Includes 10 Sub-Assistant Health Officers of Provincial Staff.

‡Other Health Staffs should include food and water analysts, leprosy specialists or similar other important public health appointments but not menials, &c., e.g., sweepers, bhistis, laboratory assistants, &c. Includes 45 Superintendents of Vaccination. 5 vaccinators employed by Ambala, Ferozepore, Lahore, Rawalpindi and Multan Cantonnments are excluded.



## APPENDIX VI (B).

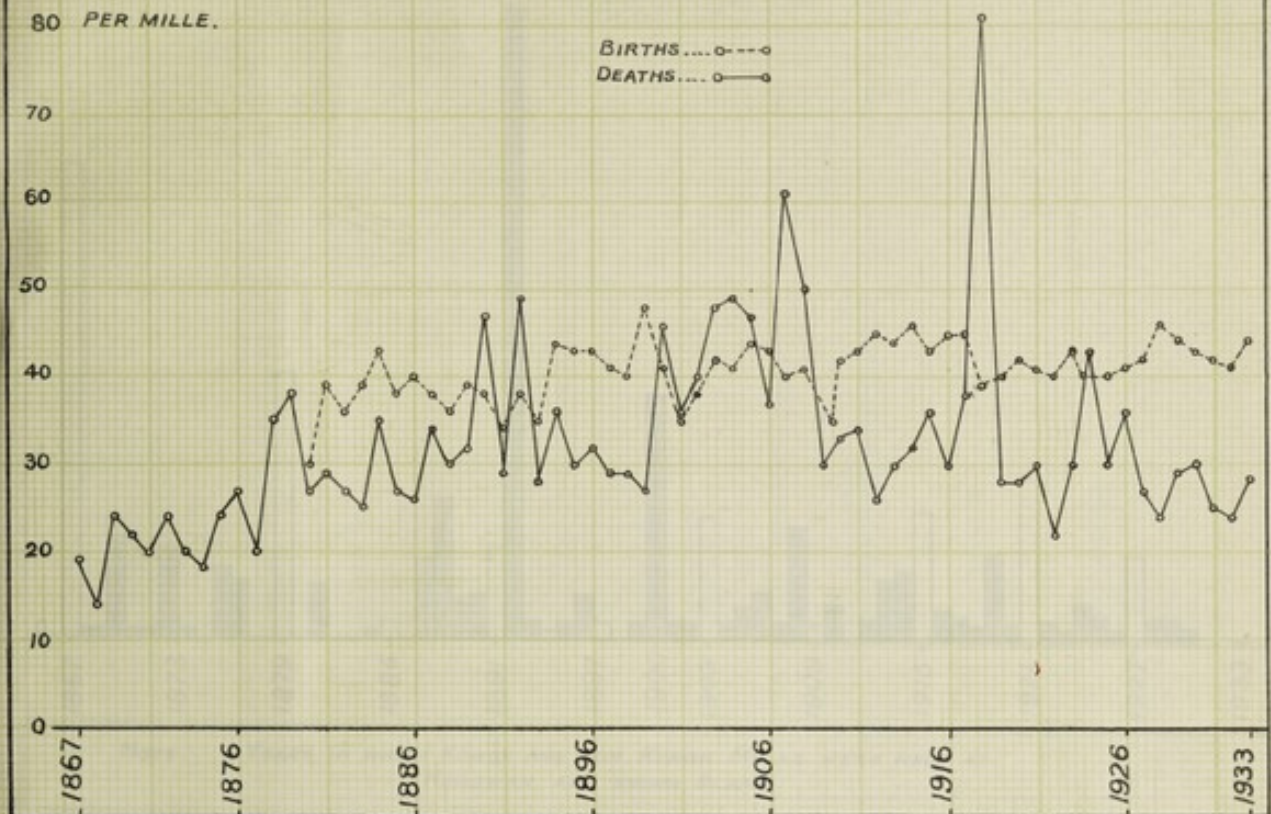
TABLE SHOWING MATERNITY AND CHILD WELFARE CENTRES, HEALTH VISITORS AND TRAINED MIDWIVES IN RURAL AND URBAN AREAS OF THE PUNJAB PROVINCE FOR THE YEAR 1952.

MATERNITY AND CHILD WELFARE.													
DISTRICTS.	CENTRES MAINTAINED BY						TRAINED VISITORS.		TRAINED MIDWIVES.		TRAINED DAYS.		REMARKS.
	Government.		Local and Municipal Bodies.		Other agencies.		Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	
	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Hissar.	..	..	..	..	..	..	..	..	..	1	..	..	6
Rohtak	..	..	7	..	..	..	1	..	..	..	..	14	..
Gurgaon	..	..	..	..	..	..	..	..	1	..	..	15	..
Karnal	..	..	..	..	..	..	..	..	..	3	..	..	..
Ambala	..	..	..	4	..	..	..	..	..	..	..	..	15
Simla	..	..	..	..	6	..	..	..	..	3	..	..	..
Kangra	..	..	..	..	..	..	1	..	..	..	..	..	19
Hoshiarpur	..	..	2	..	..	..	..	..	..	..	..	..	..
Jullundur	..	..	..	..	..	..	..	..	..	..	1	..	10
Ludhiana	..	..	3	2	..	1	..	..	..	..	..	..	18
Ferozepore	..	..	1	..	..	3	1	..	..	2	..	..	21
Labore	..	..	..	..	..	..	..	..	..	..	..	18	..
Amritsar	..	..	..	4	..	2	1	..	..	1	..	..	9
Gurdaspur	..	..	3	..	..	..	6	..	..	..	..	..	73
Sialkot	..	..	..	..	..	..	..	..	..	..	..	..	..
Gujranwala	..	..	1	1	..	..	1	..	..	1	..	..	4
Sheikhpura	..	..	..	..	..	..	..	..	..	..	..	..	..
Gujrat	..	..	..	..	5	..	1	..	..	..	..	..	..
Shahpur	..	..	..	..	..	..	..	..	1	..	..	..	..
Jhelum	..	..	..	..	3	1	..	..	..	1	..	..	..
Rawalpindi	..	..	1	2	..	..	..	..	..	4	..	..	79
Attock	..	..	..	..	..	3	..	..	..	..	..	..	..
Mianwali	..	..	..	..	..	..	..	..	..	..	..	..	..
Montgomery	..	..	..	..	1	3	..	..	..	..	1	..	..
Lyalpur	..	..	..	..	..	..	..	..	2	3	1	..	..
Jhang	..	..	1	1	..	..	1	..	..	..	1	..	..
Multan	..	..	..	..	1	..	1	..	..	..	1	..	..
Muzaffargarh	..	..	2	1	..	..	1	..	..	..	..	..	24
Dera Ghazi Khan	..	..	..	..	1	..	1	..	..	..	13	..	..
Total	..	..	21	21	14	31	20	38	4	23	94	421	..



CHART I.

*THE BIRTH AND DEATH RATES IN THE PUNJAB.  
1867-1933.*



*INFANTILE MORTALITY RATE IN THE PUNJAB.  
1880-1933.*

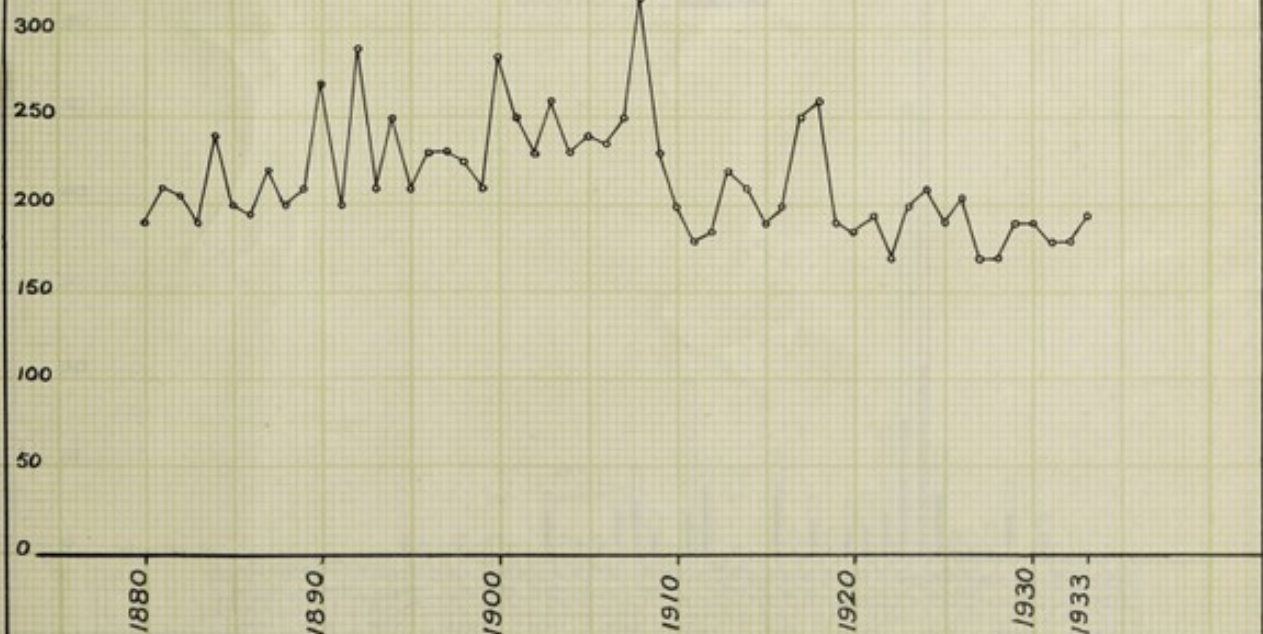
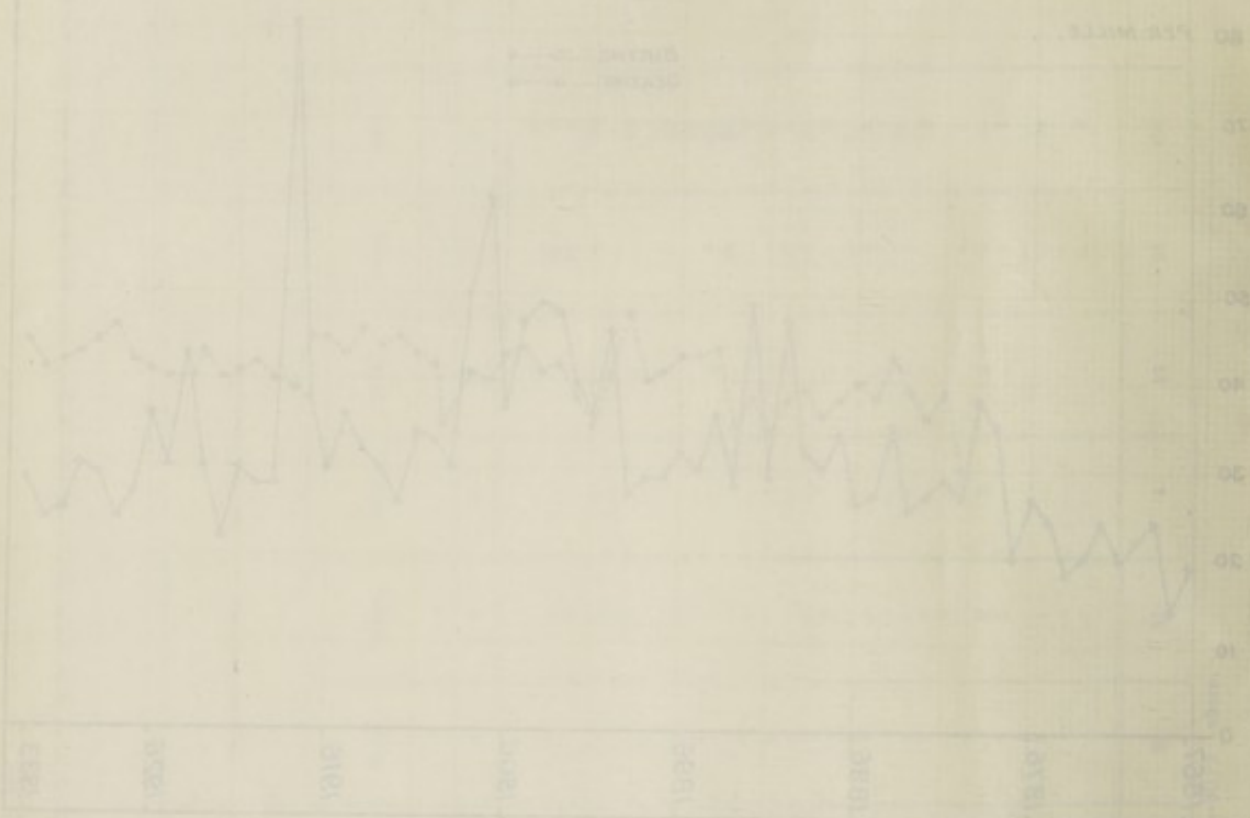


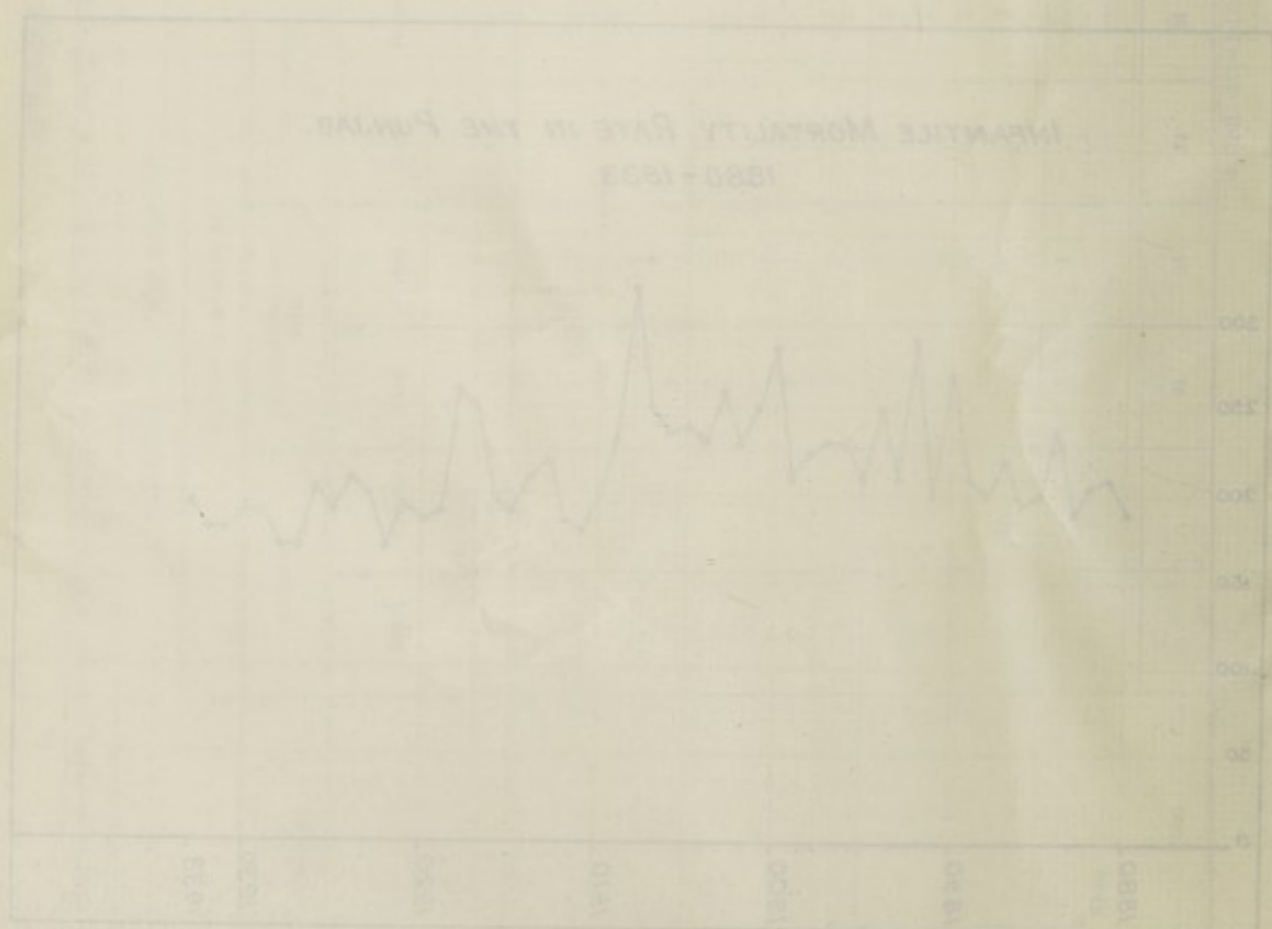


CHART 1

THE BIRTH AND DEATH RATES IN THE PULASKI  
1887-1933



INFANT MORTALITY RATE IN THE PULASKI  
1880-1933

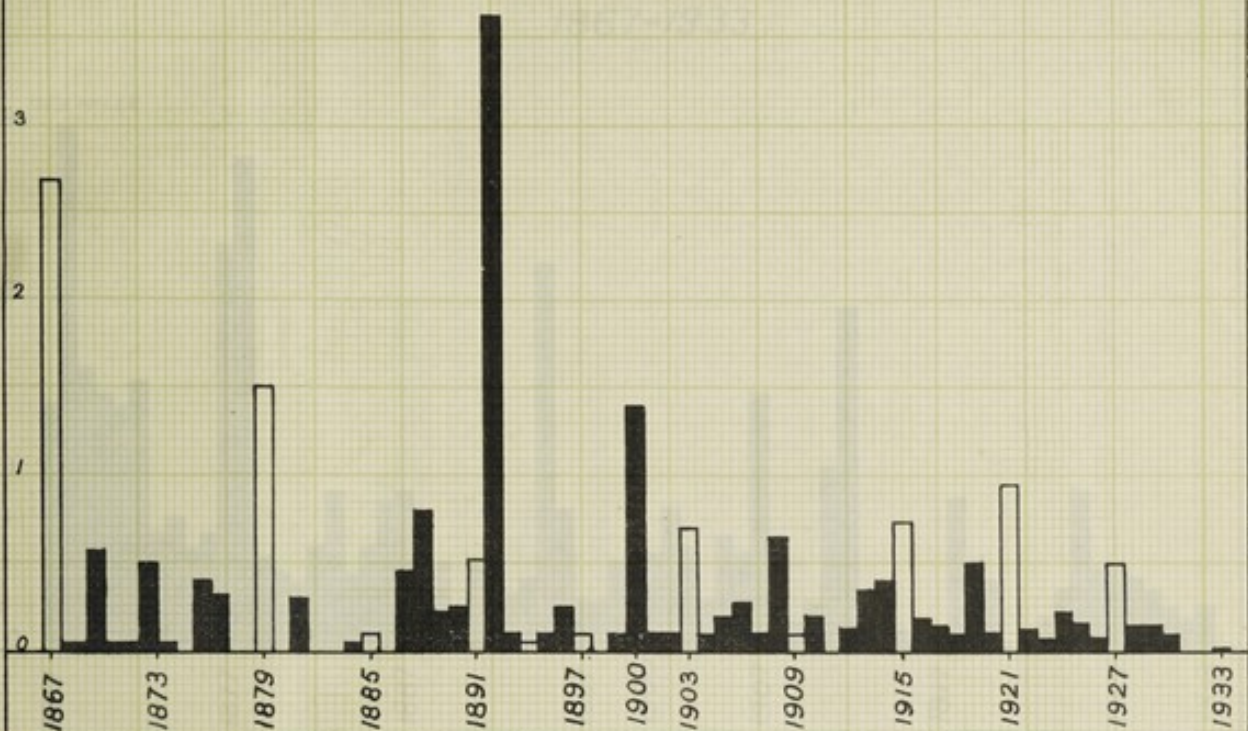




## CHART II.

### DEATH RATE FROM CHOLERA IN THE PUNJAB. 1867-1933.

4 PER MILLE



NOTE. YEARS IN WHICH KUMBH AND ADH KUMBH MELAS WERE HELD AT HARDWAR ARE SHOWN BLANK.

### DIAGRAM SHOWING TOTAL NUMBER OF CASES & DEATHS FROM CHOLERA BY WEEKS IN THE PUNJAB. DURING THE YEAR 1933

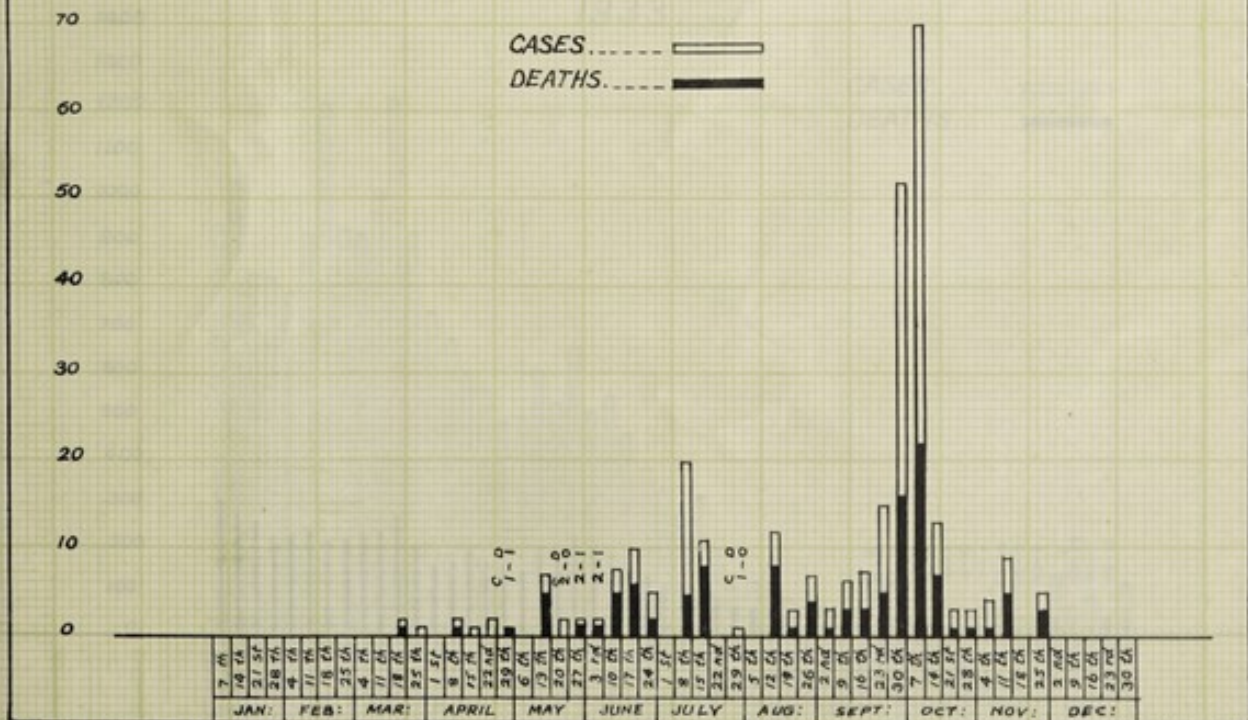


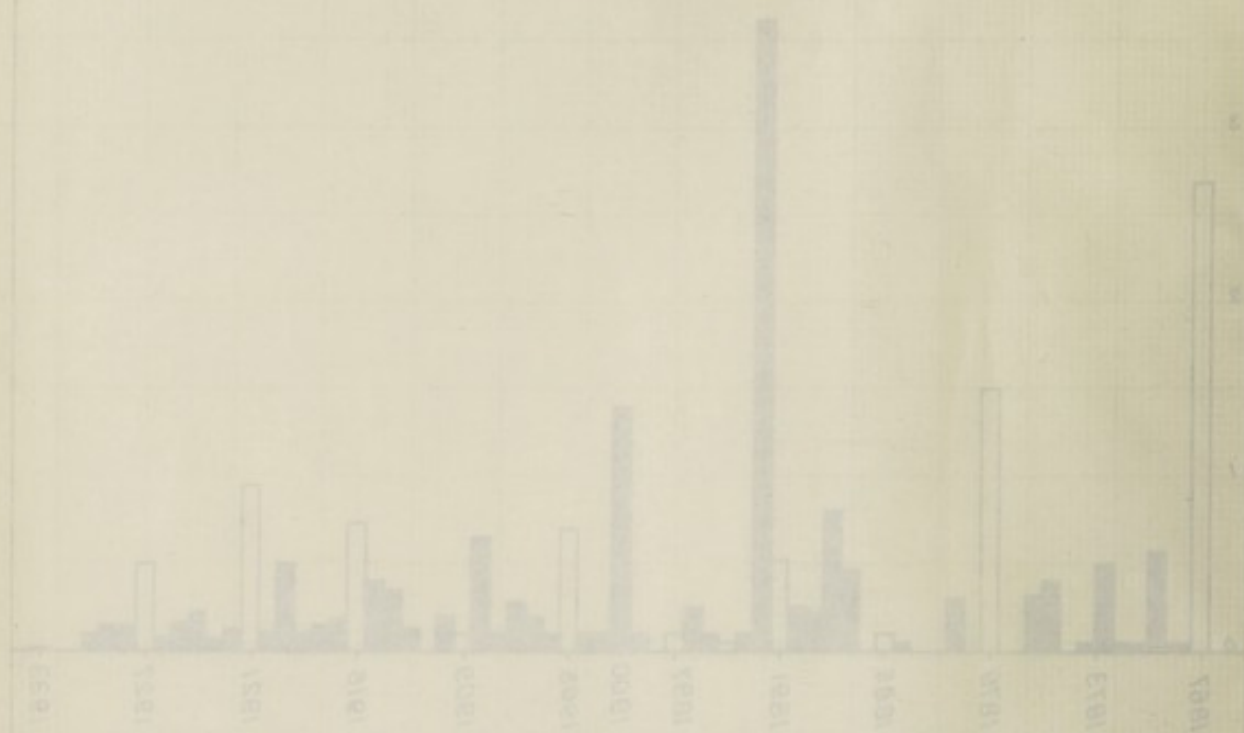


CHART II

DEATH RATE FROM CHOLERA IN THE PUNJAB

1907-1933

PER MILE



Note

Years in which cholera was not reported are marked with a dash (-)

DIAGRAM SHOWING TOTAL NUMBER OF CASES & DEATHS FROM CHOLERA BY WEEKS IN THE PUNJAB DURING THE YEAR 1917

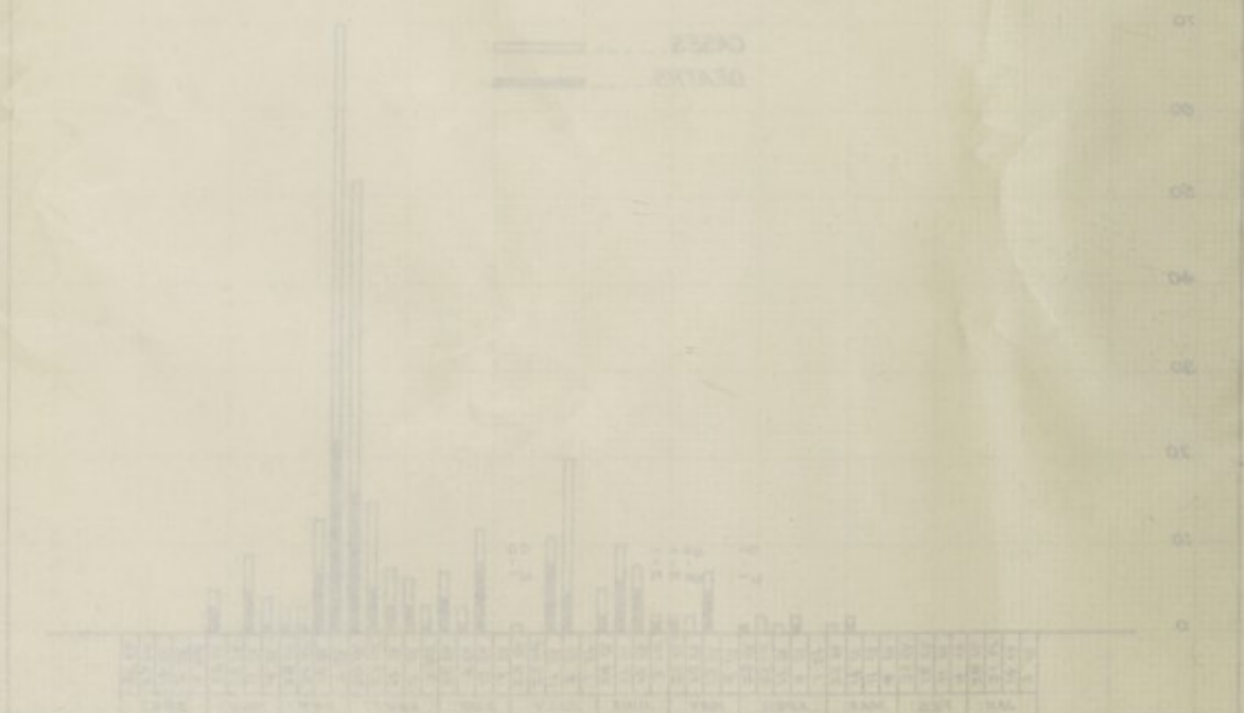




CHART III.

DEATH RATE FROM SMALLPOX IN THE PUNJAB.

1867-1933.

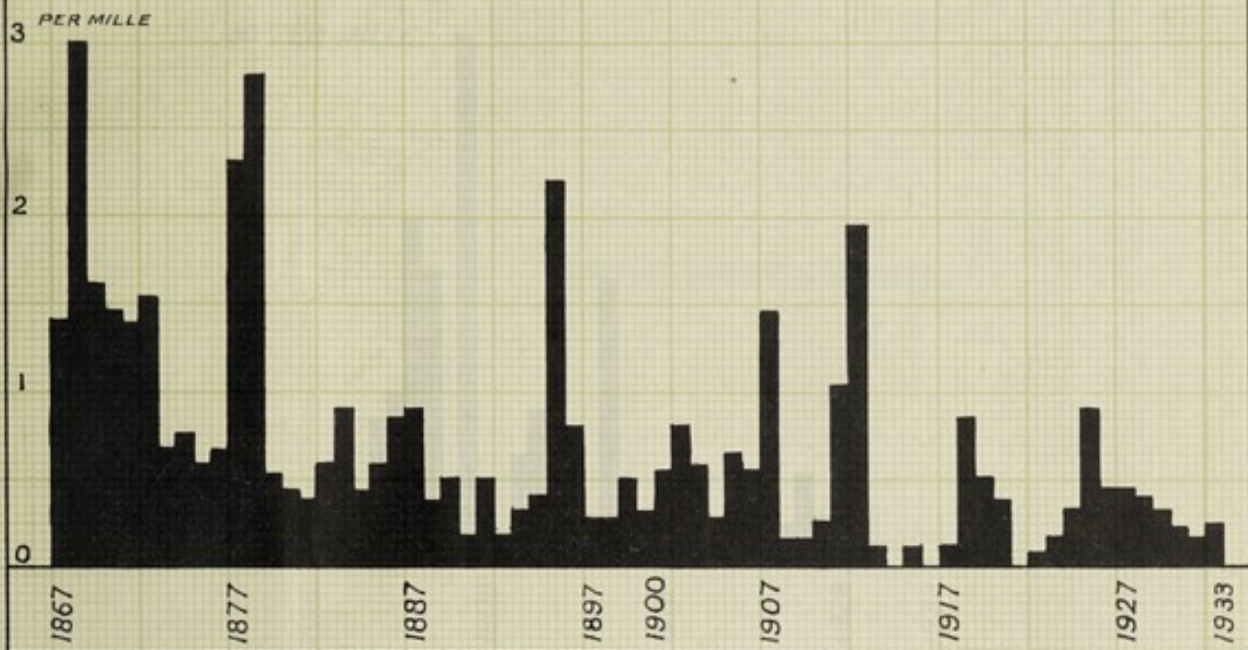


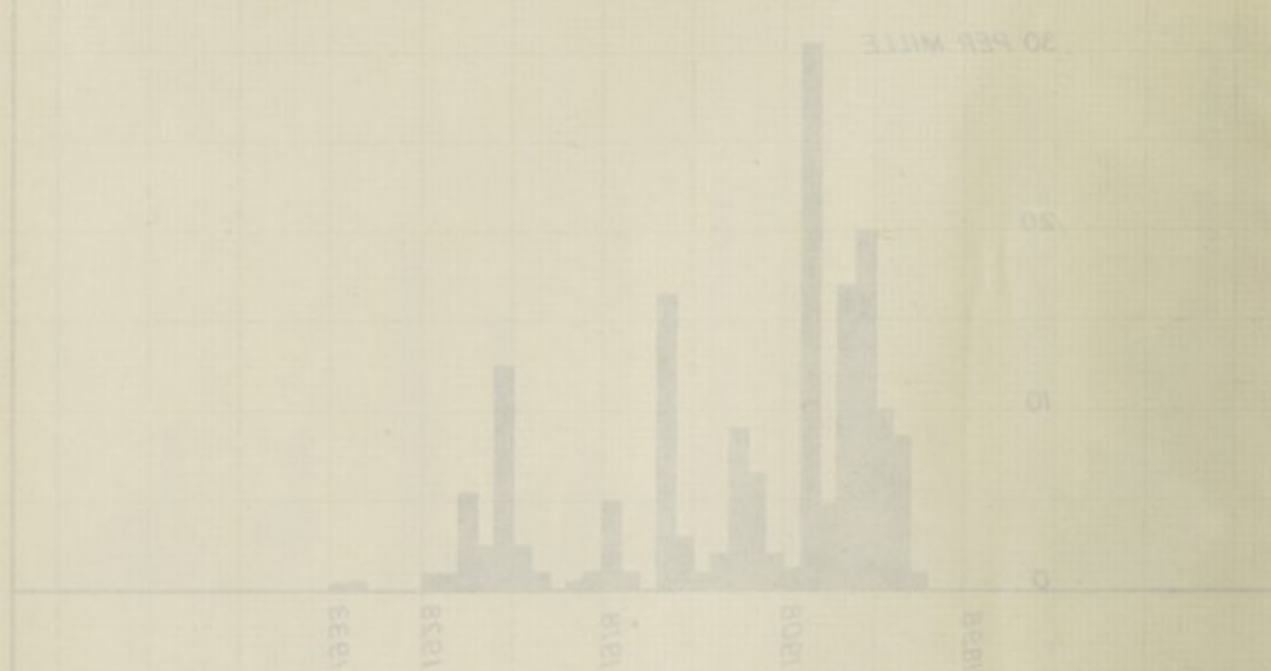
DIAGRAM SHOWING TOTAL NUMBER OF CASES & DEATHS FROM SMALLPOX BY WEEKS IN THE PUNJAB.

DURING THE YEAR 1933.





# ANNUAL PLAGUE DEATH RATE IN THE PUNJAB 1898-1903.



## DIAGRAM SHOWING TOTAL NUMBER OF CASES AND DEATHS FROM PLAGUE BY WEEKS IN THE PUNJAB DURING THE YEAR 1903.

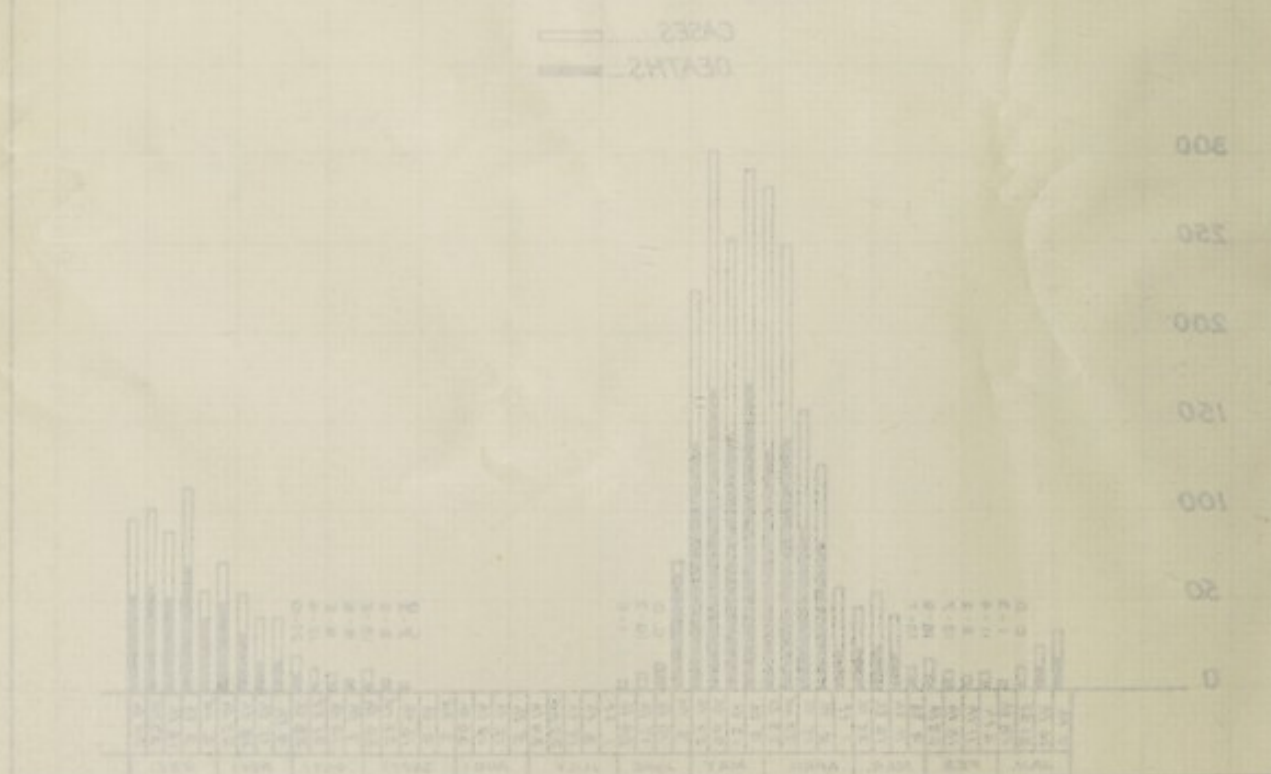




CHART V

DEATH RATE FROM FEVERS IN THE PUNJAB.  
1867 - 1933.

80 PER MILLE.

60

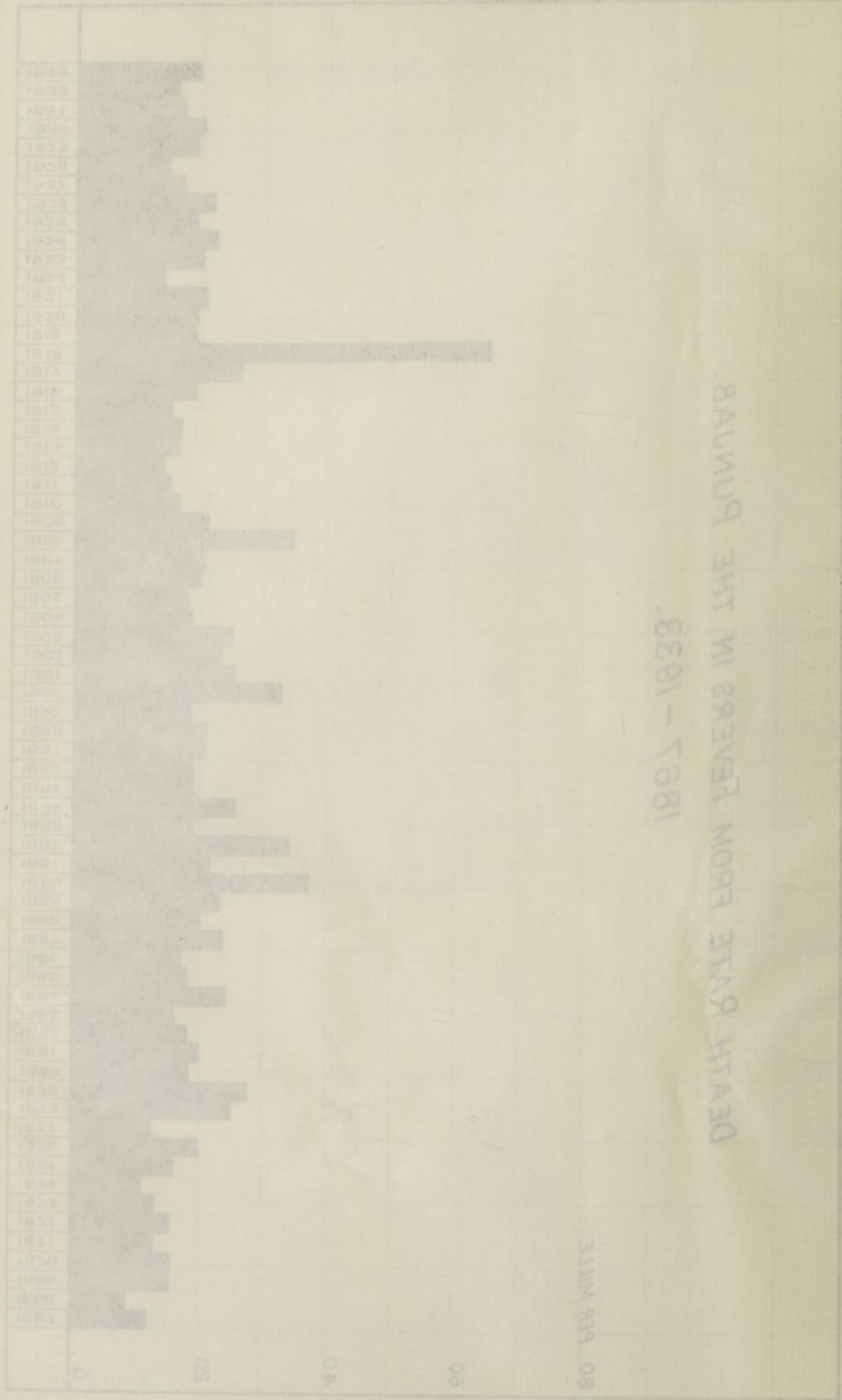
40

20

0





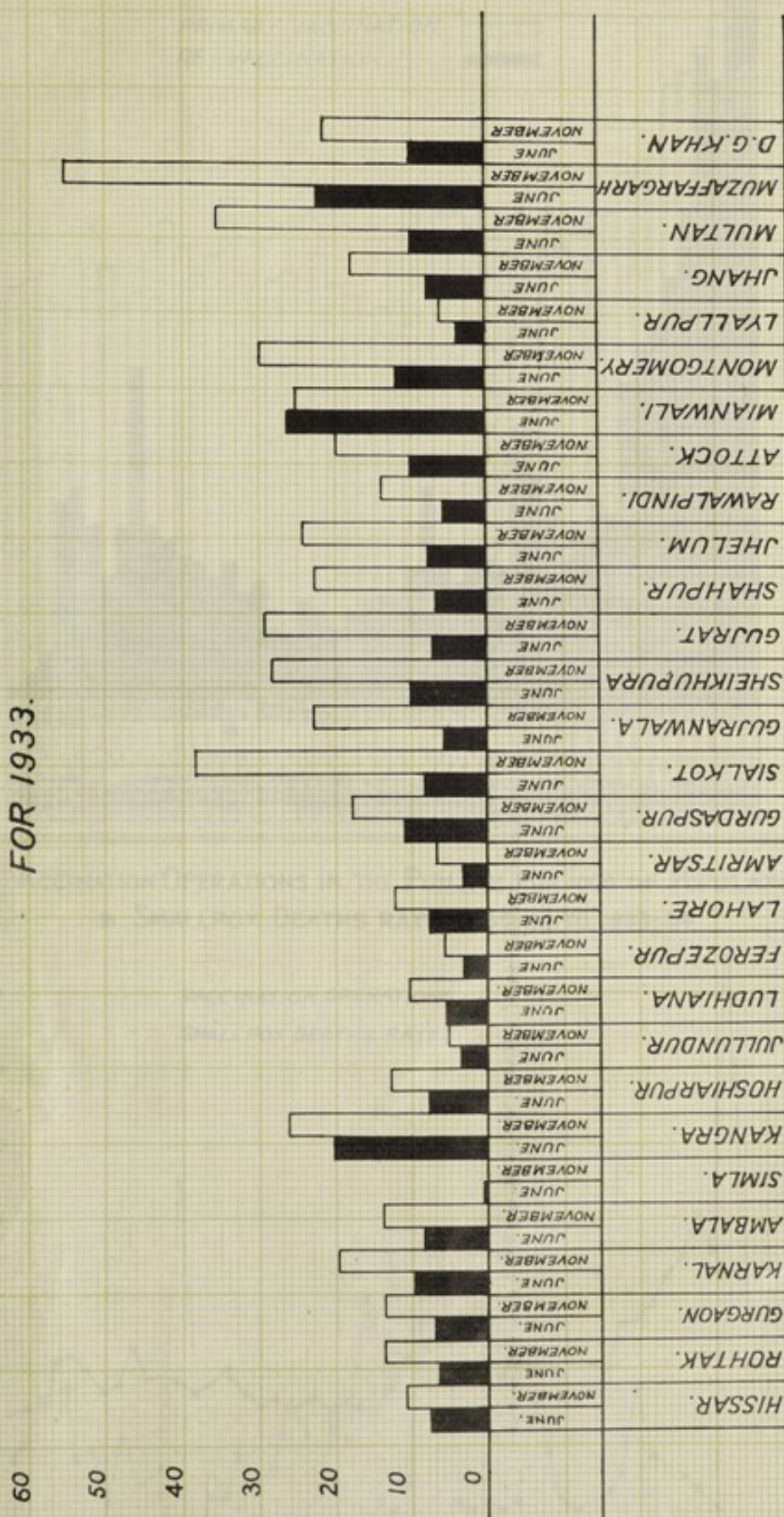


DEATH RATE FROM FEVERS IN THE PUNJAB.  
1887-1933.



# CHART VI

## SPLEEN RATE OF THE PUNJAB BY DISTRICTS FOR 1933.









# VACCINATION OPERATION IN THE PUNJAB FROM 1885-86 TO 1933-34.

800,000

600,000

400,000

200,000

0

PRIMARY VACCINATION.

RE-VACCINATION.

□

■

2,603,721

2,255,971

950,385



## VACCINATION OPERATIONS IN THE PUNJAB PER 1000 OF POPULATION & SMALLPOX DEATHS RATE 1885-86 TO 1933-34

140

120

100

80

60

40

20

0

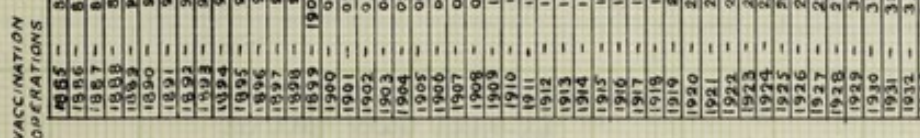
SMALLPOX  
DEATHS RATE

VACCINATION OPERATIONS.

SMALLPOX DEATHS RATE.

○—○

○- - -○





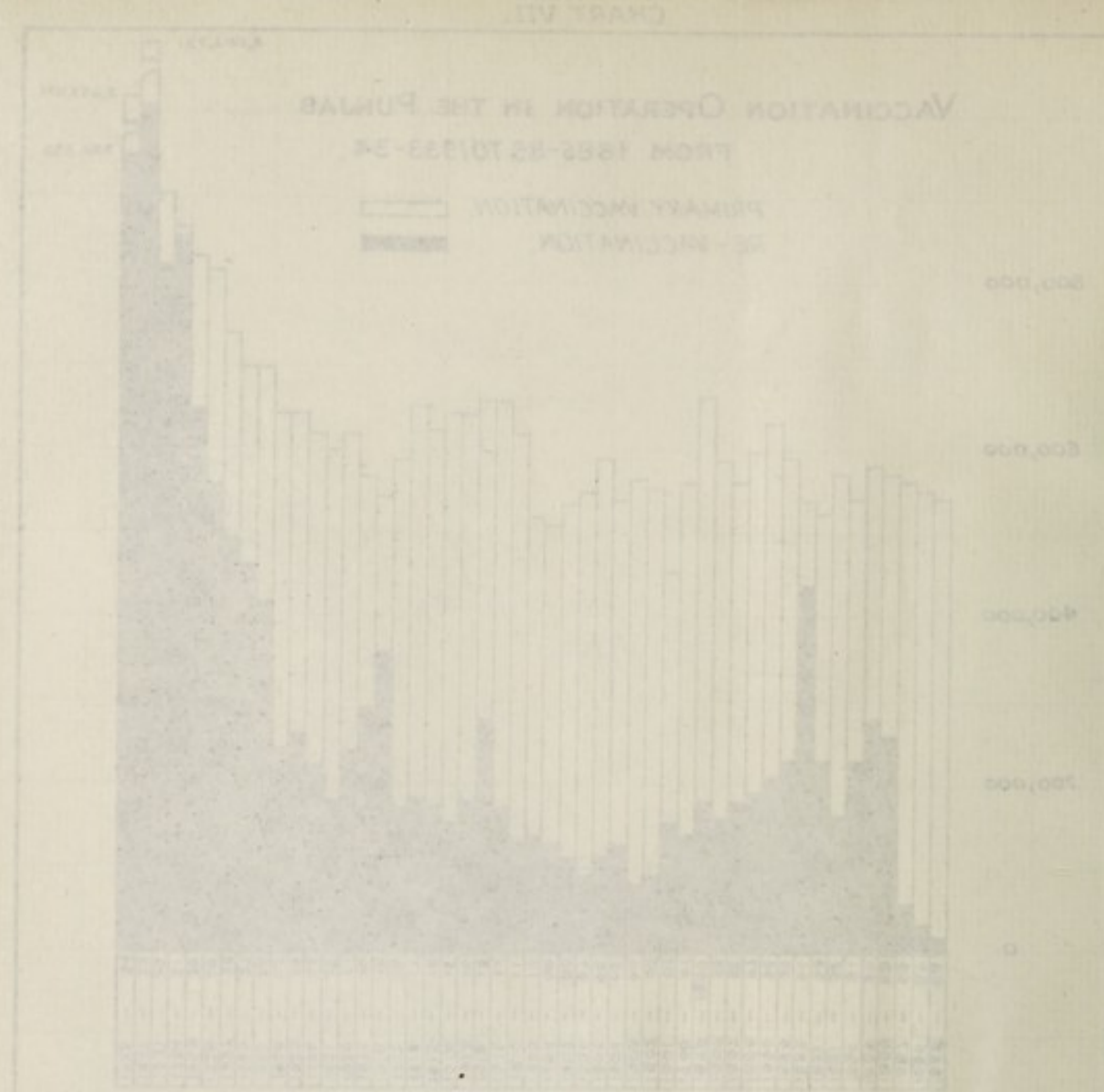
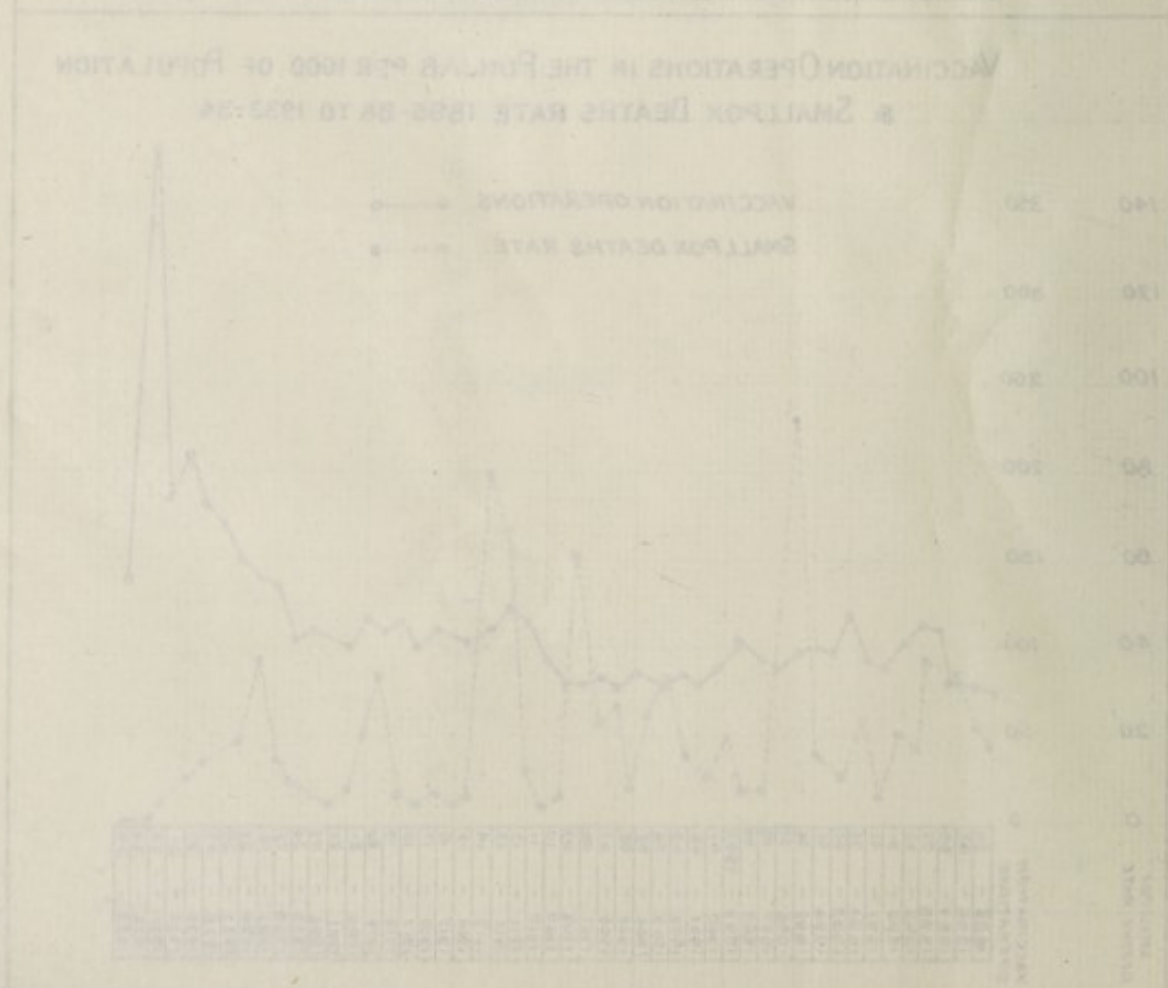
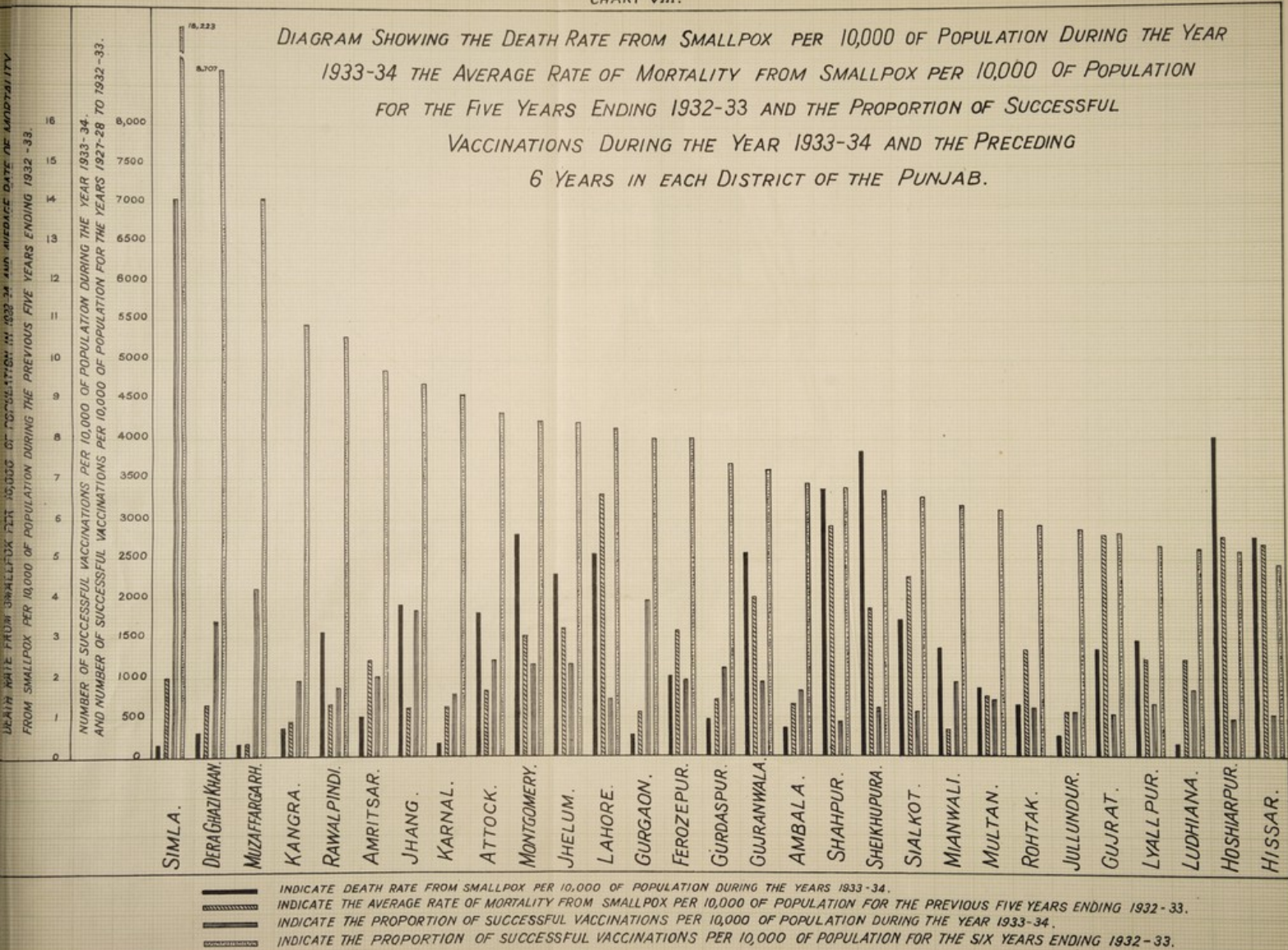




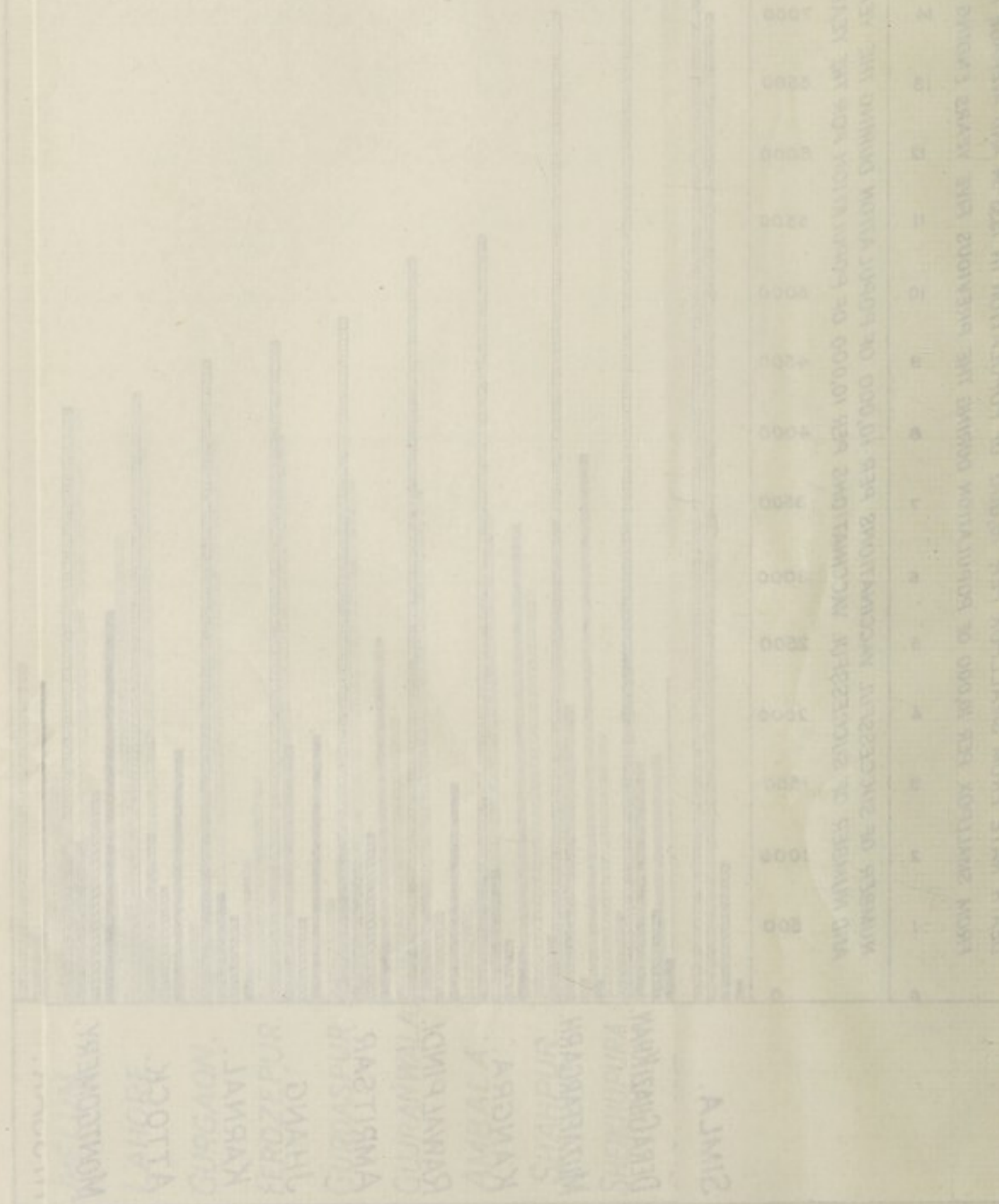
CHART VIII.

DIAGRAM SHOWING THE DEATH RATE FROM SMALLPOX PER 10,000 OF POPULATION DURING THE YEAR 1933-34 THE AVERAGE RATE OF MORTALITY FROM SMALLPOX PER 10,000 OF POPULATION FOR THE FIVE YEARS ENDING 1932-33 AND THE PROPORTION OF SUCCESSFUL VACCINATIONS DURING THE YEAR 1933-34 AND THE PRECEDING 6 YEARS IN EACH DISTRICT OF THE PUNJAB.





00000 DIAGRAM SHOWING THE DEATH  
 RATES IN EACH DISTRICT OF THE  
 YEAR 1922-23



INDICATE THE PROPORTION OF SUCCESS  
 INDICATE THE PROPORTION OF FAILURE  
 INDICATE THE AVERAGE RATE OF MORTALITY  
 INDICATE THE DEATH RATE FROM SMALL POX



## ANNUAL FORMS (PUBLIC HEALTH)

## ANNUAL FORM No. I.

STATEMENT SHOWING THE BIRTHS REGISTERED IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1933.

1	2	3			4			5			6	7	8	9			10
Number.	DISTRICTS.	POPULATION ACCORDING TO CENSUS OF 1931.*			NUMBER OF BIRTHS REGISTERED.			RATIO OF BIRTHS PER 1,000 OF POPULATION.			Number of males born to every 100 females born.	Excess of births over deaths per 1,000 of population.	Excess of deaths over births per 1,000 of population.	MEAN RATIO OF BIRTHS PER 1,000 DURING PREVIOUS FIVE YEARS.			Number.
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.				Males.	Females.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	AMBALA DIVISION.																
1	Hissar ..	485,637	413,754	899,391	19,978	18,102	38,080	22.2	20.1	42.3	110.4	12.1	..	22.3	19.8	42.1	1
2	Rohtak ..	432,829	372,742	805,571	21,950	19,809	41,759	27.3	24.6	51.8	110.8	22.0	..	24.4	21.8	46.2	2
3	Gurgaon ..	398,392	341,508	739,900	21,804	19,610	41,414	29.5	26.5	56.0	111.2	20.8	..	24.6	22.4	46.9	3
4	Karnal ..	469,840	382,730	852,570	21,556	19,153	40,709	25.3	22.5	47.8	112.5	15.9	..	21.1	18.8	39.9	4
5	Ambala ..	412,121	319,405	731,526	17,422	16,083	33,505	23.8	22.0	45.8	108.3	17.6	..	21.5	19.5	41.0	5
6	Simla ..	22,904	12,592	35,496	688	625	1,313	19.4	17.6	37.0	110.1	11.4	..	16.6	15.2	31.8	6
	JULLUNDUR DIVISION.																
7	Kangra ..	413,925	385,209	799,134	15,399	14,116	29,515	19.3	17.7	36.9	109.1	12.9	..	18.7	17.5	36.2	7
8	Hoshiarpur	551,861	480,320	1,032,181	24,134	22,170	46,304	23.4	21.5	44.9	108.9	17.5	..	21.8	19.5	41.3	8
9	Jullundur	507,560	430,165	937,725	22,905	21,253	44,158	24.4	22.7	47.1	107.8	21.7	..	22.1	20.6	42.8	9
10	Ludhiana..	375,546	296,930	672,476	15,301	13,997	29,298	22.8	20.8	43.6	109.3	17.9	..	21.8	20.0	41.8	10
11	Ferozepore	627,338	517,381	1,144,719	28,499	25,136	53,635	24.9	22.0	46.9	113.4	20.4	..	21.5	18.9	40.3	11
	LAHORE DIVISION.																
12	Lahore ..	780,984	580,394	1,361,378	29,037	25,572	54,609	21.3	18.8	40.1	113.6	17.2	..	19.4	17.0	36.3	12
13	Amritsar..	620,235	495,974	1,116,209	28,367	26,070	54,437	25.4	23.4	48.8	108.8	21.3	..	23.0	20.8	43.8	13
14	Gurdaspur	530,187	438,066	968,253	25,734	23,859	49,593	26.6	24.6	51.2	107.9	20.8	..	24.0	22.2	46.2	14
15	Sialkot ..	529,654	440,652	970,306	25,457	22,982	48,439	26.2	23.7	49.9	110.8	18.9	..	23.6	21.7	45.3	15
16	Gujranwala	408,554	327,484	736,038	18,429	16,488	34,917	25.0	22.4	47.4	111.8	4.2	..	22.2	19.7	42.0	16
17	Sheikhupura	384,366	312,281	696,647	17,898	15,704	33,602	25.7	22.5	48.2	114.0	15.6	..	22.7	20.0	42.7	17
	RAWALPINDI DIVISION.																
18	Gujrat ..	498,282	424,048	922,330	20,815	18,524	39,339	22.6	20.1	42.7	112.4	13.3	..	20.2	18.0	38.2	18
19	Shahpur ..	445,808	375,631	821,439	17,542	15,809	33,351	21.4	19.3	40.6	111.0	10.0	..	19.7	17.5	37.2	19
20	Jhelum ..	278,757	258,250	537,007	11,313	10,044	21,357	21.1	18.7	39.8	112.6	11.8	..	19.4	17.3	36.7	20
21	Rawalpindi	331,996	287,964	619,960	13,052	11,830	24,882	21.1	19.1	40.1	110.3	14.2	..	19.8	17.6	37.5	21
22	Attock ..	304,429	275,746	580,175	10,800	9,133	19,933	18.6	15.7	34.4	118.3	7.6	..	18.5	16.0	34.5	22
23	Mianwali..	215,904	195,457	411,361	9,949	8,691	18,640	24.2	21.1	45.3	114.5	14.0	..	22.3	19.7	42.1	23
	MULTAN DIVISION.																
24	Montgomery	552,330	447,259	999,589	21,973	19,245	41,218	22.0	19.3	41.2	114.2	17.8	..	18.2	15.6	33.8	24
25	Lyallpur ..	630,704	520,563	1,151,267	28,786	26,516	55,302	25.0	23.0	48.0	108.6	23.1	..	23.1	21.1	44.2	25
26	Jhang ..	355,619	309,114	664,733	14,667	13,165	27,832	22.1	19.8	41.9	111.4	16.9	..	20.7	18.5	39.2	26
27	Multan ..	642,367	523,139	1,170,506	24,316	20,153	44,469	20.8	17.2	38.0	120.7	11.4	..	18.8	16.3	35.1	27
28	Muzaffargarh	320,660	270,688	591,348	11,770	9,929	21,699	19.9	16.8	36.7	118.5	9.4	..	18.8	15.7	34.4	28
29	Dera Ghazi Khan.	269,332	221,700	491,032	10,434	8,881	19,315	21.3	18.1	39.3	117.5	14.3	..	19.4	16.2	35.6	29
	Total ..	12,798,121	10,662,146	23,460,267	549,975	492,649	1,042,624	23.4	21.0	44.4	111.6	16.2	..	21.3	19.0	40.3	

\*Excluding population of Europeans and Anglo-Indians, etc. (120,585).



## STATEMENT OF BIRTHS AND DEATHS REGISTERED IN EACH

1	2	3	4	5			6		7			8
Number.	DISTRICTS.	Area in square miles.	Average population per square mile.	POPULATION (CENSUS 1931).*			BIRTHS.		NUMBER OF DEATHS REGISTERED.			Number of deaths of males to every 100 deaths of females.
				Males.	Females.	Total.	Total number.	Birth rate per 1,000 of population.	Males.	Females.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	13
	AMBALA DIVISION.											
1	Hissar ..	5,213	173	485,637	413,754	899,391	38,080	42·3	13,158	14,025	27,183	93·8
2	Rohtak ..	2,471	326	432,829	372,742	805,571	41,759	51·8	12,578	11,444	24,022	109·9
3	Gurgaon ..	2,263	327	398,392	341,508	739,900	41,414	56·0	13,571	12,449	26,020	109·0
4	Karnal ..	3,125	273	469,840	382,730	852,570	40,709	47·8	14,496	12,727	27,223	113·9
5	Ambala ..	1,882	106	412,121	319,405	731,526	33,505	45·8	10,552	10,058	20,610	104·9
6	Simla ..	101	351	22,904	12,592	35,496	1,313	37·0	513	397	910	129·2
	JULLUNDUR DIVISION.											
7	Kangra ..	9,976	80	413,925	385,209	799,134	29,515	36·9	9,773	9,397	19,170	104·0
8	Hoshiarpur ..	2,247	459	551,861	480,320	1,032,181	46,304	44·9	14,476	13,758	28,234	105·2
9	Jullundur ..	1,431	655	507,560	430,165	937,725	44,158	47·1	12,421	11,373	23,794	109·2
10	Ludhiana ..	1,452	463	375,546	296,930	672,476	29,298	43·6	9,049	8,200	17,249	110·4
11	Ferozepore ..	4,290	267	627,338	517,381	1,144,719	53,635	46·9	16,284	14,066	30,350	115·8
	LAHORE DIVISION.											
12	Lahore ..	2,682	508	780,984	580,394	1,361,378	54,609	40·1	16,868	14,312	31,180	117·9
13	Amritsar ..	1,593	701	620,235	495,974	1,116,209	54,437	48·8	15,759	14,925	30,684	105·6
14	Gurdaspur ..	1,889	513	530,187	438,066	968,253	49,593	51·2	15,367	14,032	29,399	109·5
15	Sialkot ..	1,578	615	529,654	440,652	970,306	48,439	49·9	15,751	14,357	30,108	109·7
16	Gujranwala ..	2,309	319	408,554	327,484	736,038	34,917	47·4	16,911	14,870	31,781	113·7
17	Sheikhupura ..	2,302	303	384,366	312,281	696,647	33,602	48·2	11,915	10,809	22,724	110·2
	RAWALPINDI DIVISION.											
18	Gujrat ..	2,250	410	498,282	424,048	922,330	39,339	42·7	13,997	13,131	27,128	106·6
19	Shahpur ..	4,789	172	445,808	375,631	821,439	33,351	40·6	12,644	12,457	25,101	101·5
20	Jhelum ..	2,773	194	278,757	258,250	537,007	21,357	39·8	7,612	7,447	15,059	102·2
21	Rawalpindi ..	2,023	306	331,996	287,964	619,960	24,882	40·1	8,215	7,827	16,042	105·0
22	Attock ..	4,117	141	304,429	275,746	580,175	19,933	34·4	8,043	7,522	15,565	106·9
23	Mianwali ..	5,395	76	215,904	195,457	411,361	18,640	45·3	6,602	6,271	12,873	105·3
	MULTAN DIVISION.											
24	Montgomery ..	4,518	221	552,330	447,259	999,589	41,218	41·2	12,271	11,132	23,403	110·2
25	Lyallpur ..	3,224	357	630,704	520,563	1,151,267	55,302	48·0	14,795	13,850	28,645	106·8
26	Jhang ..	3,452	193	355,619	309,114	664,733	27,832	41·9	8,525	8,086	16,611	105·4
27	Multan ..	5,892	199	612,367	528,139	1,170,506	44,469	38·0	16,137	14,936	31,073	106·9
28	Muzaffargarh ..	6,052	98	320,660	270,688	591,348	21,699	36·7	8,478	7,670	16,148	110·5
29	Dera Ghazi Khan ..	5,325	92	269,332	221,700	491,032	19,315	39·3	6,637	5,616	12,253	118·2
	Total ..	96,614	243	12,798,121	10,662,146	23,460,267	1,042,624	44·4	343,398	317,144	660,542	108·3

NOTE.—Those born dead are not included

\*Excluding population of



No. II.

DISTRICT OF THE PUNJAB DURING THE YEAR 1933.

9											10			11
DEATH RATE PER 1,000 OF POPULATION FROM											MEAN RATIO OF DEATHS PER 1,000 DURING PREVIOUS FIVE YEARS.			Number.
Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory cases.	Injuries.	All other causes.	All causes.			Males.	Females.	Total.	
14	15	16	17	18	19	20	21	Males.	Females.	Total.	25	26	27	28
0.01	0.7	..	22.1	0.3	0.5	..	6.6	27.1	33.9	30.2	24.4	25.0	24.6	1
0.01	0.2	..	22.8	0.4	1.6	0.4	4.6	29.1	30.7	29.8	24.7	24.8	24.8	2
..	0.1	..	22.1	0.3	2.0	0.5	10.2	34.1	36.5	35.2	29.5	30.4	29.9	3
0.001	0.04	..	25.6	0.2	1.5	0.3	4.3	30.9	33.3	31.9	25.7	28.6	27.0	4
0.004	0.1	..	15.5	0.4	6.4	0.1	5.6	25.6	31.5	28.2	25.4	29.5	27.2	5
..	0.03	..	3.5	1.4	10.8	0.3	9.6	22.4	31.5	25.6	22.7	32.8	26.3	6
0.02	0.2	..	10.8	3.2	5.8	1.0	3.0	23.6	24.4	24.0	30.7	31.3	31.0	7
0.001	1.0	0.9	19.0	0.6	2.3	0.2	3.5	26.2	28.6	27.4	26.7	27.5	27.1	8
..	0.1	0.04	17.7	0.3	2.2	0.3	4.7	24.5	26.4	25.4	22.7	24.8	23.7	9
..	0.1	..	12.7	0.4	2.3	0.001	10.1	24.1	27.6	25.7	23.3	26.7	24.8	10
..	0.3	..	18.2	0.2	1.8	0.3	5.8	26.0	27.2	26.5	25.0	25.8	25.4	11
0.02	0.9	0.001	11.1	0.7	3.2	0.5	6.6	21.6	24.7	22.9	21.9	25.1	23.3	12
0.04	0.3	0.04	17.4	0.3	5.2	0.3	3.9	25.4	30.1	27.5	25.3	28.1	26.5	13
0.01	0.1	0.1	17.1	0.5	3.0	0.2	9.4	29.0	32.0	30.4	27.1	29.0	28.0	14
0.002	0.6	0.1	20.8	0.6	4.2	0.3	4.5	29.7	32.6	31.0	23.4	25.1	24.2	15
0.001	0.9	0.001	37.4	0.2	1.1	0.3	3.3	41.4	45.4	43.2	25.0	26.5	25.7	16
0.02	1.4	..	25.4	0.1	0.9	0.3	4.5	31.0	34.6	32.6	22.1	22.7	22.4	17
..	0.6	0.7	22.6	0.2	2.1	0.3	3.0	28.1	31.0	29.4	20.9	21.2	21.0	18
0.01	1.5	..	22.2	0.3	2.2	0.3	4.1	28.4	33.2	30.6	24.5	26.1	25.3	19
0.001	0.9	..	20.6	0.2	1.9	0.4	4.0	27.3	28.8	28.0	24.4	23.7	24.1	20
0.001	0.3	..	17.1	2.9	3.0	0.5	2.3	24.7	27.2	25.9	23.2	24.1	23.6	21
0.003	0.5	..	22.3	0.1	1.3	0.3	2.4	26.4	27.3	26.8	23.2	22.5	22.9	22
..	0.3	..	25.6	0.2	0.9	0.1	4.3	30.6	32.1	31.3	28.5	28.1	28.3	23
0.004	0.9	..	18.5	0.3	1.0	0.1	2.6	22.2	24.9	23.4	19.2	20.3	19.7	24
0.01	0.6	0.001	17.5	0.1	1.6	0.1	4.9	23.5	26.6	24.9	20.3	23.0	21.5	25
0.001	0.5	..	16.5	0.3	2.3	0.3	5.0	24.0	26.2	25.0	22.6	23.3	22.9	26
0.004	0.3	..	20.2	1.0	1.4	0.4	3.3	25.1	28.3	26.6	20.0	21.1	20.5	27
..	0.03	..	24.1	0.1	0.9	0.5	1.7	26.4	28.3	27.3	25.6	26.5	26.0	28
..	0.2	..	21.6	0.2	0.7	0.3	2.0	24.6	25.3	25.0	24.7	24.8	24.8	29
0.01	0.5	0.1	19.6	0.5	2.4	0.3	4.8	26.8	29.7	28.2	24.0	25.5	24.7	

in this or in any other statement.  
Europeans and Anglo-Indians, etc. (120,585).



## ANNUAL FORM No. III.

DEATHS REGISTERED IN THE DISTRICTS (RURAL CIRCLES) AND IN THE TOWNS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1933.

1	2	3												4
Number.	A—Rural Circles.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total deaths registered during the year.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b>AMBALA DIVISION.</b>														
1	Hissar ..	1,694	1,640	1,926	1,915	2,056	2,128	1,545	1,379	1,714	2,996	2,768	2,059	23,820
2	Rohtak ..	1,373	1,207	1,305	1,399	1,636	2,132	1,431	1,287	1,357	2,540	3,411	2,334	21,412
3	Gurgaon ..	1,383	1,331	1,369	1,525	1,813	2,332	1,828	1,499	1,652	2,915	3,579	2,786	24,012
4	Karnal ..	1,734	1,295	1,435	1,409	1,800	2,039	1,717	1,311	2,605	3,243	3,239	2,590	24,417
5	Ambala ..	1,497	1,100	1,263	1,126	1,165	1,260	1,150	1,167	1,555	2,222	2,148	1,831	17,484
6	Simla ..	26	29	33	26	29	31	37	52	36	22	14	34	369
<b>JULLUNDUR DIVISION.</b>														
7	Kangra ..	1,846	1,727	1,562	1,291	1,552	1,739	1,302	1,449	1,745	1,741	1,640	1,493	19,087
8	Hoshiarpur ..	2,154	1,841	1,885	2,140	2,573	2,238	1,727	1,868	2,312	3,155	2,630	2,476	26,996
9	Jullundur ..	1,532	1,344	1,408	1,357	1,683	1,842	1,593	1,665	1,784	2,475	2,166	1,756	20,603
10	Ludhiana ..	1,332	1,050	981	920	1,117	1,181	1,084	1,159	1,163	1,679	1,630	1,343	14,639
11	Ferozepore ..	2,369	2,094	1,970	1,640	1,946	2,195	1,941	1,928	2,131	3,214	3,355	2,822	27,603
<b>LAHORE DIVISION.</b>														
12	Lahore ..	2,295	1,557	1,484	1,394	1,833	1,805	1,915	1,236	1,355	1,582	1,958	1,739	20,153
13	Amritsar ..	1,856	1,493	1,476	1,276	1,827	2,082	1,825	1,907	2,137	2,703	2,578	2,028	23,188
14	Gurdaspur ..	2,044	1,687	1,663	1,465	2,046	2,006	1,757	1,822	2,372	4,151	3,870	2,752	27,635
15	Sialkot ..	2,396	1,495	1,404	1,160	1,785	1,712	1,546	1,770	2,222	4,225	4,603	2,829	27,147
16	Gujranwala ..	1,828	1,495	1,154	1,011	1,468	1,606	1,345	1,271	1,508	5,561	6,983	4,510	29,740
17	Sheikhupura ..	1,793	1,424	1,202	1,170	1,471	1,532	1,403	1,301	1,371	3,111	3,627	2,626	22,031
<b>RAWALPINDI DIVISION.</b>														
18	Gujrat ..	1,981	1,411	1,347	1,203	1,662	1,531	1,338	1,292	1,544	3,899	4,771	3,502	25,481
19	Shahpur ..	1,925	1,498	1,377	1,462	1,631	1,754	1,360	1,014	1,225	2,768	4,108	3,019	23,141
20	Jhelum ..	1,327	1,025	825	728	871	973	831	839	990	1,885	2,230	1,678	14,202
21	Rawalpindi ..	1,468	1,292	890	691	880	919	788	952	1,186	1,689	1,617	1,332	13,704
22	Attock ..	1,517	1,222	998	842	861	967	956	792	836	1,616	2,419	2,000	15,026
23	Mianwali ..	1,215	1,012	845	717	716	812	767	679	793	1,262	1,673	1,516	12,007
<b>MULTAN DIVISION.</b>														
24	Montgomery ..	2,210	1,907	1,684	1,588	1,822	1,918	1,532	1,108	1,429	2,239	2,860	2,462	22,759
25	Lyallpur ..	2,768	2,087	1,939	2,027	2,336	2,767	2,210	1,830	1,988	2,362	2,557	2,202	27,073
26	Jhang ..	1,361	1,103	980	925	1,074	1,079	917	729	826	1,604	2,243	1,857	14,698
27	Multan ..	1,814	1,779	1,499	1,319	1,718	1,389	1,171	1,038	1,456	3,293	5,759	5,174	27,409
28	Muzaffargarh ..	1,415	1,257	973	824	859	746	620	557	961	1,973	2,746	2,461	15,392
29	Dera Ghazi Khan.	1,099	909	740	569	502	504	468	416	785	1,434	1,758	1,673	10,857
Total for Rural Circles.		49,252	40,311	37,617	35,119	42,732	45,219	38,104	35,317	43,038	73,559	84,940	66,884	592,092
Ratio per mille of population.		2.40	1.96	1.83	1.71	2.08	2.20	1.85	1.72	2.09	3.58	4.13	3.25	28.81



## ANNUAL FORM No. III—CONTINUED.

DEATHS REGISTERED IN THE DISTRICTS (RURAL CIRCLES) AND IN THE TOWNS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1933.

1	2	3												4
Number.	B—TOWNS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total deaths registered during the year.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	<b>HISSAR DISTRICT.</b>													
1	Hissar ..	73	77	60	95	162	99	57	29	58	40	44	60	854
2	Hansi ..	31	36	40	63	59	72	38	27	37	66	57	62	588
3	Bhiwani ..	116	129	144	178	124	114	77	66	136	127	124	101	1,436
4	Sirsa ..	41	39	30	49	39	36	32	20	25	48	63	48	470
5	Budhlada ..	3	2	..	3	1	1	1	2	1	..	1	..	15
	<b>ROHTAK DISTRICT.</b>													
6	Rohtak ..	40	44	54	53	92	88	44	48	55	65	123	67	773
7	Jhajjar ..	41	24	28	33	35	51	21	18	48	22	42	25	388
8	Bori ..	23	21	20	17	36	32	20	14	20	40	42	25	310
9	Gohana ..	10	4	11	4	13	17	7	5	11	32	54	23	191
10	Bahadurgarh ..	20	11	10	16	38	32	15	25	10	34	62	22	295
11	Sonepat ..	22	27	18	36	57	71	30	43	36	31	56	32	459
12	Mehm ..	16	10	14	5	23	45	19	5	15	17	17	8	194
13	Rohtak Civil Line.	..	..	..	..	..	..	..	..	..	..	..	..	..
	<b>GURGAON DISTRICT.</b>													
14	Rewari ..	112	82	76	40	45	114	59	46	67	66	78	59	844
15	Palwal ..	19	18	17	22	27	65	35	27	43	46	102	46	467
16	F i r o z p u r - Jhirka.	21	12	9	10	9	32	12	8	15	12	11	15	166
17	Hodal ..	10	12	18	10	4	18	20	11	12	15	33	21	184
18	Ballabgarh ..	5	4	6	9	6	19	10	8	9	18	21	13	128
19	Faridabad ..	4	8	6	8	7	19	7	7	16	9	11	11	113
20	Hid a y a t p u r Chhaoni.	1	4	6	5	8	13	10	8	23	8	13	7	106
	<b>KARNAL DISTRICT.</b>													
21	Karnal ..	56	27	40	54	70	60	49	73	74	68	93	72	736
22	Kaithal ..	24	31	20	29	41	52	26	44	45	89	59	48	508
23	Panipat ..	83	33	55	73	112	139	90	107	64	106	78	59	999
24	Shahabad ..	30	22	16	17	23	22	15	26	21	50	29	36	307
25	Thanesar ..	10	6	5	4	12	5	..	12	12	44	19	14	143
26	Pundri ..	5	5	8	2	6	10	1	5	7	7	13	11	80
27	Karnal Civil Line.	6	2	4	4	..	5	2	1	1	1	3	4	33
	<b>AMBALA DISTRICT.</b>													
28	Ambala ..	40	46	50	77	53	70	70	57	69	81	78	97	788
29	Jagadhri ..	34	29	31	29	24	51	41	41	37	39	55	33	444
30	Burya ..	9	8	6	11	14	11	7	7	6	7	10	11	107
31	Sadhaura ..	23	18	18	16	11	20	10	13	22	24	19	30	224



## ANNUAL FORM No. III—CONTINUED.

DEATHS REGISTERED IN THE DISTRICTS (RURAL CIRCLES) AND IN THE TOWNS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1933.

1	2	3												4
Number.	B—Towns.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total deaths registered during the year.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	<b>AMBALA DISTRICT— CONCLD.</b>													
32	Rupar ..	14	14	9	20	21	23	19	20	20	25	19	20	224
33	Kalka ..	9	7	5	4	16	11	9	14	9	18	13	26	141
34	Ambala Civil Line.	..	..	..	1	..	1	..	..	..	..	..	..	2
35	Sanawar Civil Line.	..	..	1	..	..	1	2	1	..	2	..	..	7
36	Ambala Cantonment.	71	98	72	107	94	130	104	60	100	93	117	101	1,147
37	Kasauli Cantonment.	3	1	6	2	4	4	7	2	6	2	3	2	42
	<b>SIMLA DISTRICT.</b>													
38	Simla ..	38	33	23	40	47	44	60	46	48	29	36	30	474
39	Dagshai Cantonment.	2	2	2	4	4	..	3	2	2	2	2	1	26
40	Subathu Cantonment.	4	1	1	2	1	2	1	..	3	2	4	3	24
41	Jutogh Cantonment.	2	..	1	1	1	1	..	2	4	3	1	1	17
	<b>KANGRA DISTRICT.</b>													
42	Dharmasala ..	4	3	3	4	4	6	8	2	3	3	4	4	48
43	Dharmasala Cantonment.	6	1	1	3	2	6	4	1	4	..	3	4	35
	<b>HOSHIARPUR DISTRICT.</b>													
44	Hoshiarpur ..	38	38	36	36	55	60	34	36	29	41	37	34	474
45	Hariana ..	5	7	6	5	12	10	4	8	9	6	6	2	80
46	Dasuyah ..	11	10	12	13	38	24	6	20	12	18	15	15	194
47	Tanda Urmur ..	21	11	18	12	28	25	17	17	23	43	21	14	250
48	Miani ..	11	4	15	10	14	27	31	14	18	25	21	18	208
49	Garshankar ..	2	2	..	6	3	7	..	1	2	..	5	1	29
50	Hoshiarpur Civil Line.	..	..	..	..	..	..	..	..	..	..	..	..	..
	<b>JULLUNDUR DISTRICT.</b>													
51	Jullundur ..	122	150	101	129	150	188	108	147	139	190	134	108	1,666
52	Kartarpur ..	20	16	19	35	38	43	31	27	26	24	14	15	308
53	Banga ..	15	9	9	8	11	13	6	8	9	7	16	14	125
54	Rahon ..	8	14	11	21	18	11	11	18	18	30	14	17	191
55	Phillaur ..	13	7	5	15	16	8	26	13	14	18	11	10	156
56	Nurmahal ..	20	13	15	19	21	15	13	10	12	20	12	15	185
57	Nakodar ..	20	25	26	30	38	27	15	26	14	23	16	15	275
58	Nawanshahr ..	7	13	11	12	15	14	19	15	13	22	17	10	168
59	Jullundur Cantonment.	11	13	6	9	14	5	6	14	9	12	11	5	115



## ANNUAL FORM No. III—CONTINUED.

DEATHS REGISTERED IN THE DISTRICTS (RURAL CIRCLES) AND IN THE TOWNS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1933.

1	2	3												4
Number.	B—Towns.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total deaths registered during the year.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
60	LUDHIANA DISTRICT.													
	Ludhiana ..	190	159	186	120	131	107	210	74	115	163	120	112	1,687
61	Jagraon ..	53	25	49	32	39	57	50	39	46	42	42	39	513
62	Raekot ..	22	17	19	17	25	22	28	28	19	26	25	16	264
63	Khanna ..	14	14	16	..	9	9	14	16	8	7	4	8	119
64	Ludhiana Civil Line.	2	2	3	3	3	5	3	5	..	1	..	..	27
	FEROZEPORE DISTRICT.													
65	Ferozepore ..	60	54	43	34	52	71	56	57	49	51	71	65	663
66	Zira ..	12	14	6	7	13	10	8	14	11	10	10	17	132
67	Dharmkot ..	21	10	11	17	11	17	11	11	19	22	18	14	182
68	Muktsar ..	21	22	23	14	17	32	26	26	27	19	18	21	266
69	Fazilka ..	53	34	36	25	38	66	42	32	39	54	39	30	488
70	Moga ..	16	23	26	27	22	30	30	27	33	42	42	16	334
71	Abohar ..	15	11	15	10	15	16	13	6	10	12	10	8	141
72	Jalalabad ..	13	8	18	6	9	10	9	13	9	3	9	5	112
73	Ferozepore Cantonment.	45	28	40	34	26	52	35	31	31	20	47	38	427
	LAHORE DISTRICT.													
74	Lahore ..	886	619	540	762	594	895	810	651	689	642	727	768	8,583
75	Chunian ..	26	20	12	18	14	17	21	11	14	10	23	31	217
76	Kasur ..	115	70	66	97	80	113	76	63	80	52	52	72	936
77	Khem Karan ..	26	24	16	18	27	23	23	10	16	15	17	17	232
78	Patti ..	29	33	34	30	24	22	35	20	34	22	30	41	354
79	Baghbanpura	22	18	3	30	36	25	38	3	15	..	18	17	225
80	Bhogiwal.	9	9	3	9	11	5	13	12	8	6	7	4	96
81	Ichhra ..	9	9	3	9	11	5	13	12	8	6	7	4	96
81	Pattoki Mandi	13	11	4	18	9	19	16	16	10	12	9	8	145
82	Sur Singh ..	9	7	9	12	13	14	22	11	26	10	16	11	160
83	Lahore Cantonment.	..	..	13	..	..	..	6	9	19	6	18	8	79
	AMRITSAR DISTRICT.													
84	Amritsar ..	676	486	509	496	572	609	595	483	565	697	709	456	6,853
85	Majitha ..	10	13	6	4	25	13	18	13	15	22	12	11	162
86	Jandiala ..	16	17	9	12	17	19	18	14	29	11	7	16	185
87	Tarn Taran ..	7	9	9	10	13	16	7	14	10	12	12	8	127
88	Sultanwind ..	14	7	12	12	20	11	11	11	10	13	19	17	157
89	Amritsar Cantonment.	3	1	..	1	2	3	..	2	..	..	..	..	12
	GURDASPUR DISTRICT.													
90	Gurdaspur ..	14	12	11	15	13	5	16	4	21	26	22	20	179
91	Dina Nagar ..	11	7	1	3	2	16	3	7	7	11	6	14	88



ANNUAL FORM No. III—CONTINUED.

DEATHS REGISTERED IN THE DISTRICTS (RURAL CIRCLES) AND IN THE TOWNS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1933.

1	2	3												4
Number.	B—Towns.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total deaths registered during the year.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	<b>GURDASPUR DISTRICT—CONCLD.</b>													
92	Pathankot ..	19	18	15	21	17	15	19	31	24	39	24	33	275
93	Dalhousie ..	..	..	..	..	..	..	..	..	1	..	2	1	4
94	Batala ..	68	44	70	54	74	80	73	89	109	86	81	81	909
95	Dera Nanak ..	9	6	13	8	8	15	8	11	18	13	13	13	135
96	Fatehgarh ..	3	13	3	10	6	7	8	7	7	8	12	3	87
97	Qadian ..	..	..	..	..	..	..	..	..	..	19	17	1	37
98	Gurdaspur Civil Line.	..	..	..	..	..	..	..	..	..	..	..	..	..
99	Dalhousie Cantonment.	..	..	..	..	..	..	..	..	..	..	..	..	..
100	Bakloh Cantonment.	8	6	6	2	4	8	5	3	2	1	4	1	50
	<b>SIALKOT DISTRICT.</b>													
101	Sialkot ..	149	123	100	136	136	159	172	192	254	238	236	218	2,113
102	Daska ..	7	3	..	1	2	3	4	7	5	13	21	8	74
103	Pasrur ..	13	16	9	17	13	21	15	14	21	17	17	19	192
104	Narowal ..	16	7	14	23	20	33	14	18	21	29	30	33	258
105	Chawinda ..	11	15	8	7	7	16	12	12	20	17	22	12	159
106	Sialkot Cantonment.	15	9	11	15	15	7	20	8	14	20	19	12	165
	<b>GUJRANWALA DISTRICT.</b>													
107	Gujranwala ..	80	102	72	86	76	80	108	80	89	119	124	138	1,154
108	Wazirabad ..	23	20	10	21	17	17	30	13	26	43	67	52	339
109	Eminabad ..	17	11	7	8	9	5	7	7	12	17	30	22	152
110	Akalgah ..	8	12	3	6	..	4	10	3	7	9	16	14	92
111	Hafizabad ..	19	11	14	13	19	29	29	16	34	30	47	43	304
	<b>SHEIKHU-PURA DISTRICT.</b>													
112	Sangla ..	9	11	9	7	3	6	3	2	3	2	4	15	64
113	Sharakpur ..	10	5	7	8	14	14	10	6	11	20	30	18	153
114	Nankana Sahib	12	5	4	5	5	12	4	5	9	12	25	17	115
115	Shahdara ..	9	13	7	14	9	7	13	3	16	16	31	13	151
116	Sheikhupura ..	17	8	12	17	11	6	12	11	18	29	29	40	210
	<b>GUJRAT DISTRICT.</b>													
117	Gujrat ..	65	46	69	88	108	66	79	72	83	118	129	63	986
118	Jalsapur ..	25	19	22	26	30	26	23	24	29	27	30	16	297
119	Kunjah ..	18	11	18	12	16	17	10	15	24	28	26	12	207
120	Dinga ..	10	5	8	5	1	7	5	8	10	18	32	9	118
121	Gujrat Civil Line.	2	3	5	7	12	..	1	2	2	3	1	1	39



## ANNUAL FORM No. III—CONTINUED.

DEATHS REGISTERED IN THE DISTRICTS (RURAL CIRCLES) AND IN THE TOWNS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1933.

1	2		3											4
	B.—Towns.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total deaths registered during the year.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	<b>SHAHPUR DISTRICT.</b>													
22	Shahpur ..	5	4	7	8	11	11	9	13	10	37	67	41	223
23	Sahiwal ..	11	15	17	8	13	12	9	8	21	21	21	30	186
24	Bhera ..	76	38	26	23	26	46	28	24	35	93	140	81	636
25	Miani ..	20	16	13	7	12	7	14	9	16	56	48	24	242
26	Khushab ..	34	29	28	17	15	18	29	13	12	29	65	18	307
27	Sargodha ..	31	21	14	15	25	42	26	16	17	34	34	37	312
28	Shahpur Civil Station.	2	1	3	1	5	7	3	5	2	5	15	5	54
	<b>JHELUM DISTRICT.</b>													
29	Jhelum ..	21	13	19	17	25	37	25	27	19	35	38	45	321
30	Pind Dadan Khan.	26	9	14	15	27	25	15	18	34	53	65	43	344
31	Chakwal ..	12	13	9	11	23	15	15	14	12	17	25	16	182
32	Jhelum Cantonment.	..	1	..	..	..	2	2	2	..	2	1	..	10
	<b>RAWALPINDI DISTRICT.</b>													
33	Rawalpindi ..	159	193	153	141	168	145	143	140	166	148	264	209	2,029
34	Murree ..	3	3	..	7	7	7	11	11	..	3	..	4	56
35	Murree Cantonment.	..	..	..	..	..	2	3	1	..	3	..	..	9
36	Rawalpindi Cantonment.	29	25	16	21	23	21	15	21	10	23	19	21	244
	<b>ATTOCK DISTRICT.</b>													
37	Pindigheb ..	35	26	14	16	17	21	19	19	28	21	26	17	259
38	Hazro ..	16	15	3	13	16	10	19	18	17	21	25	28	201
39	Campbellpur ..	5	6	5	5	5	11	8	4	3	4	4	5	65
40	Campbellpur Cantonment.	..	1	2	1	..	1	3	2	1	2	1	..	14
	<b>MIANWALI DISTRICT.</b>													
41	Mianwali ..	19	20	17	12	8	22	19	23	18	12	26	13	209
42	Bhakkar ..	15	14	17	22	17	22	14	12	9	32	37	30	241
43	Isa Khel ..	18	13	10	10	4	6	10	21	7	9	27	16	151
44	Kalabagh ..	27	16	18	13	20	13	26	27	19	21	39	26	265
	<b>MONTGOMERY DISTRICT.</b>													
45	Montgomery ..	24	16	15	18	14	31	10	16	11	25	11	21	212
46	Pakpattan ..	15	8	16	3	40	16	22	10	17	36	35	38	256
47	Okara ..	12	16	16	9	14	18	6	10	11	7	40	17	176
	<b>LYALLPUR DISTRICT.</b>													
48	Lyallpur ..	111	70	53	82	77	102	113	64	69	59	55	48	903
49	Gujra ..	9	11	4	11	21	9	13	5	10	16	5	10	124
50	Tandlianwala ..	4	11	8	6	8	14	9	9	11	13	9	7	109



## ANNUAL FORM NO. III—CONCLUDED.

DEATHS REGISTERED IN THE DISTRICTS (RURAL CIRCLES) AND IN THE TOWNS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1933.

1	2	3												4
Number.	B.—TOWNS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total deaths registered during the year.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	<b>LYALLPUR DISTRICT—CONSOL.</b>													
151	Toba Tek Singh	3	4	4	1	7	9	1	1	4	5	1	1	41
152	Jaranwala ..	6	7	6	5	3	12	3	8	12	12	4	12	90
153	Kamalia ..	43	20	17	18	21	24	26	13	33	21	28	41	305
	<b>JHANG DISTRICT.</b>													
154	Jhang-Maghiana	64	69	78	49	84	96	94	71	111	70	66	91	943
155	Chiniot ..	47	33	48	22	35	61	51	46	72	41	60	46	562
156	Ahmadpur ..	2	7	7	10	4	10	4	1	8	20	49	96	218
157	Shorkot ..	15	15	12	11	19	15	19	7	10	16	26	25	190
	<b>MULTAN DISTRICT.</b>													
158	Multan ..	216	210	196	284	277	276	239	227	197	291	380	242	3,035
159	Shujabad ..	22	15	8	18	18	22	15	14	18	46	56	33	285
160	Khanewal ..	6	6	1	4	5	..	3	1	6	..	5	4	41
161	Kahrar ..	9	18	11	6	17	12	13	7	5	11	29	2	140
162	Tulamba ..	2	13	10	5	8	7	4	4	5	10	22	25	115
163	Multan Cantonment.	..	..	..	..	2	9	6	7	8	8	4	4	48
	<b>MUZAFFARGARH DISTRICT.</b>													
164	Muzaffargarh ..	12	6	5	9	10	6	8	6	11	17	20	17	127
165	Khangarh ..	9	8	2	4	5	5	6	5	12	12	21	12	101
166	Alipur ..	15	3	10	5	3	1	7	3	11	14	34	13	119
167	Leish ..	26	16	17	14	16	19	7	19	11	24	53	34	256
168	Karor ..	7	4	9	2	4	4	6	8	9	15	42	36	146
169	Muzaffargarh Civil Line.	..	..	..	..	..	..	..	2	1	2	..	2	7
	<b>DERA GHAZI KHAN DISTRICT.</b>													
170	Dera G h a z i Khan.	49	39	45	24	29	33	17	40	27	41	73	62	479
171	Jampur ..	18	27	24	13	19	22	26	20	19	30	39	46	303
172	Dajal ..	47	17	26	16	5	10	23	4	21	13	47	40	269
173	Rajanpur ..	27	9	6	8	1	8	12	7	15	21	12	12	138
174	Kot Mithan ..	6	14	8	4	5	8	3	8	6	9	15	13	99
175	Taunsa ..	19	4	12	7	3	1	3	2	12	18	19	8	108
	Total for Towns	5,879	4,797	4,577	5,081	5,571	6,441	5,560	4,812	5,623	6,504	7,487	6,118	68,450
	Ratio per mille for towns.	2.02	1.65	1.57	1.75	1.91	2.21	1.91	1.65	1.93	2.24	2.57	2.10	23.52
	Total for the Province.	55,131	45,108	42,194	40,200	48,303	51,660	43,664	40,129	48,661	80,063	92,427	73,002	660,542
	Ratios per mille for the Province.	2.35	1.92	1.80	1.71	2.06	2.20	1.86	1.71	2.07	3.41	3.94	3.11	28.16



## ANNUAL FORM No. IV.

DEATHS REGISTERED ACCORDING TO AGE IN THE DISTRICTS (RURAL CIRCLES) AND TOWNS OF THE PUNJAB PROVINCE DURING THE YEAR 1933.

Number.	A.—Rural Circles.	NOT EXCEEDING ONE MONTH.										UNDER ONE YEAR.										ONE AND UNDER FIVE YEARS.		
		Males.					Females.					Over one month and not exceeding six months.					Over six months and not exceeding twelve months.					Total.	Males.	Females.
		Under one week.	Over one week.	Total.	Under one week.	Over one week.	Total.	Under one week.	Over one week.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.						
																			3	4	5		6	7
1	2	3																				4.		
1	AMBALA DIVISION.																							
1	Hissar	269	286	555	201	211	412	967	1,151	1,061	2,212	1,164	1,006	2,230	2,870	2,539	5,409	391	490					
2	Rohatak	836	636	1,472	689	486	1,175	2,647	1,210	1,032	2,242	908	723	1,631	3,590	2,930	6,520	2,963	2,676					
3	Gurgaon	984	718	1,702	800	541	1,341	3,043	1,218	1,111	2,329	1,190	1,026	2,216	4,110	3,478	7,588	2,932	2,783					
4	Karnal	1,375	864	2,239	1,079	668	1,747	3,986	835	652	1,487	533	423	976	3,627	2,822	6,449	795	514					
5	Ambala	661	655	1,316	567	602	1,169	2,485	789	763	1,552	879	733	1,612	2,984	2,065	5,049	737	747					
6	Simla	20	12	32	14	5	19	51	23	12	35	12	8	20	67	39	106	24	20					
7	JULLUNDUR DIVISION.																							
7	Kangra	683	488	1,171	681	540	1,221	2,392	654	719	1,373	731	795	1,526	2,556	2,735	5,291	506	541					
8	Hoshiarpur	1,079	816	1,895	829	727	1,556	3,451	1,104	921	2,025	1,353	1,244	2,597	4,352	3,721	8,073	2,162	2,137					
9	Jullundur	1,453	758	2,211	1,276	712	1,988	4,199	713	710	1,423	907	840	1,747	3,831	3,538	7,369	2,270	2,090					
10	Ludhiana	838	643	1,481	652	574	1,226	2,707	704	556	1,260	563	722	1,285	2,748	2,504	5,252	839	702					
11	Ferozepore	1,655	975	2,630	1,365	842	2,207	4,837	1,199	935	2,134	1,135	992	2,127	4,964	4,134	9,098	3,238	2,811					
12	LAHORE DIVISION.																							
12	Lahore	338	393	731	252	310	562	1,293	959	780	1,739	1,107	957	2,064	2,797	2,299	5,096	1,525	1,205					
13	Amritsar	1,434	913	2,347	1,158	797	1,955	4,302	891	840	1,731	1,407	1,207	2,614	4,645	4,002	8,647	2,631	2,633					
14	Gurdaspur	1,405	967	2,372	1,182	832	2,014	4,386	1,128	982	2,110	1,392	1,297	2,689	4,892	4,293	9,185	3,154	2,941					
15	Sialkot	804	758	1,562	623	651	1,274	2,826	1,455	1,296	2,661	1,324	1,113	2,437	4,341	3,593	7,934	2,762	2,707					
16	Gujranwala	831	664	1,495	719	636	1,355	2,850	1,506	1,294	2,800	1,497	1,311	2,808	4,498	3,960	8,458	3,533	3,287					
17	Sheikhpura	807	667	1,474	668	493	1,161	2,635	1,070	896	1,966	1,104	1,027	2,131	3,648	3,084	6,732	3,443	3,370					
18	RAWALPINDI DIVISION.																							
18	Gujrat	646	701	1,347	579	547	1,126	2,473	1,079	935	2,014	851	762	1,613	3,277	2,823	6,100	3,368	3,171					
19	Shahpur	703	539	1,242	637	459	1,096	2,398	1,203	1,112	2,375	978	970	1,948	3,543	3,178	6,721	3,231	3,509					
20	Jhelum	465	418	883	423	360	783	1,666	621	516	1,137	446	404	850	1,950	1,703	3,653	1,440	1,536					
21	Rawalpindi	479	459	938	439	421	860	1,798	512	446	958	621	494	1,115	2,071	1,800	3,871	965	902					
22	Attock	108	92	200	107	105	212	412	465	358	823	557	516	1,073	1,222	1,086	2,308	605	541					
23	Manwali	661	489	1,141	564	385	949	2,090	621	536	1,157	467	400	927	2,229	1,945	4,174	1,075	1,123					
24	MULTAN DIVISION.																							
24	Montgomery	1,000	778	1,778	1,061	777	1,838	3,616	1,183	980	2,163	989	927	1,916	3,950	3,745	7,695	1,190	1,370					
25	Lyalpur	1,023	1,012	2,035	991	894	1,885	3,920	1,391	1,203	2,594	1,587	1,554	3,141	5,013	4,642	9,655	3,981	3,741					
26	Jhang	789	509	1,298	661	405	1,066	2,364	766	674	1,440	666	558	1,224	2,630	2,298	4,928	1,626	1,682					
27	Multan	1,159	807	1,966	965	651	1,616	3,582	1,326	1,171	2,497	1,315	1,112	2,427	4,697	3,899	8,596	2,801	2,617					
28	Muzaffargarh	434	430	864	285	341	626	1,490	791	733	1,524	653	645	1,298	2,308	2,004	4,312	1,365	1,365					
29	Dera Ghazi Khan	311	426	737	246	269	515	1,252	751	573	1,324	445	388	833	1,933	1,476	3,409	1,132	1,165					
	Total for Rural Areas	23,310	17,864	41,174	19,713	15,241	34,954	76,128	27,378	23,707	51,085	26,701	24,274	50,975	95,253	82,935	178,188	56,890	54,376					
	Ratio per mille	†	†	†	†	†	†	†	†	†	†	†	†	†	*194.95	*189.56	192.40*	†	†					

\*Calculated on births.

†Population not available.



## ANNUAL FORM No. IV—CONCLUDED.

DEATHS REGISTERED ACCORDING TO AGE IN THE DISTRICTS AND (RURAL CIRCLES AND TOWNS) OF THE PUNJAB PROVINCE DURING THE YEAR 1933—CONCLUDED.

1	2	5	6	7	8	9	10	11	12	13
		FIVE AND UNDER TEN YEARS.	TEN AND UNDER FIFTEEN YEARS.	FIFTEEN AND UNDER TWENTY YEARS.	TWENTY AND UNDER THIRTY YEARS.	THIRTY AND UNDER FORTY YEARS.	FORTY AND UNDER FIFTY YEARS.	FIFTY AND UNDER SIXTY YEARS.	SIXTY YEARS AND UPWARDS.	TOTAL (ALL AGES).
		Males.	Males.	Males.	Males.	Males.	Males.	Males.	Males.	Males.
		Females.	Females.	Females.	Females.	Females.	Females.	Females.	Females.	Females.
1	2	21	22	23	24	25	26	27	28	29
1	AMBALA DIVISION.	535	619	708	792	926	1,040	1,166	1,368	1,451
2	Hissar	444	379	315	313	307	328	321	680	489
3	Rohiatak	326	254	377	326	424	403	387	895	773
4	Gurgaon	417	399	453	469	536	339	329	329	405
5	Karnal	417	399	453	469	536	339	329	329	405
6	Ambala	417	399	453	469	536	339	329	329	405
7	Simla	4	4	4	1	10	5	17	14	12
8	JULLUNDUR DIVISION.	510	562	605	643	685	621	796	714	901
9	Kangra	830	814	489	536	458	505	594	706	579
10	Hoshiarpur	359	371	241	238	191	218	422	532	383
11	Jullundur	398	414	359	328	350	388	401	375	469
12	Ludhiana	705	589	426	415	425	502	712	768	738
13	Ferozepore	860	605	625	441	567	452	541	343	627
14	LAHORE DIVISION.	454	457	305	379	284	335	414	613	414
15	Lahore	763	783	545	510	493	494	707	786	714
16	Amritsar	639	619	460	452	470	424	1,300	1,267	1,089
17	Gurdaspur	1,091	928	1,013	851	969	864	952	824	967
18	Sialkot	675	653	364	298	234	212	470	560	396
19	Sheikhpura	749	734	505	545	402	444	587	631	622
20	RAWALPINDI DIVISION.	750	810	333	325	251	251	523	658	429
21	Gujrat	429	452	212	248	133	172	324	507	333
22	Shahpur	514	503	378	373	317	297	299	314	425
23	Jhelum	831	771	797	690	835	779	801	682	713
24	Attock	390	443	153	185	215	189	331	443	349
25	Mianwali	1,096	1,029	1,101	917	1,079	897	953	814	855
26	Montgomery	824	778	443	474	284	336	473	600	400
27	Lyallpur	463	474	222	239	121	149	325	429	360
28	Jhang	1,067	949	559	567	617	725	788	877	721
29	Multan	482	437	297	245	260	309	466	750	602
30	Muzaffargarh	447	357	187	99	117	92	322	420	349
31	Dera Ghazi Khan	17,715	16,640	12,813	12,177	12,105	12,100	17,004	18,462	17,425
32	Total for Rural Areas	17,715	16,640	12,813	12,177	12,105	12,100	17,004	18,462	17,425
33	Ratio per mille	†	†	†	†	†	†	†	†	†
34		†	†	†	†	†	†	†	†	†
35		†	†	†	†	†	†	†	†	†
36		†	†	†	†	†	†	†	†	†
37		†	†	†	†	†	†	†	†	†
38		†	†	†	†	†	†	†	†	†
39		†	†	†	†	†	†	†	†	†
40		†	†	†	†	†	†	†	†	†
41		†	†	†	†	†	†	†	†	†
42		†	†	†	†	†	†	†	†	†
43		†	†	†	†	†	†	†	†	†
44		†	†	†	†	†	†	†	†	†
45		†	†	†	†	†	†	†	†	†
46		†	†	†	†	†	†	†	†	†
47		†	†	†	†	†	†	†	†	†
48		†	†	†	†	†	†	†	†	†
49		†	†	†	†	†	†	†	†	†
50		†	†	†	†	†	†	†	†	†
51		†	†	†	†	†	†	†	†	†
52		†	†	†	†	†	†	†	†	†
53		†	†	†	†	†	†	†	†	†
54		†	†	†	†	†	†	†	†	†
55		†	†	†	†	†	†	†	†	†
56		†	†	†	†	†	†	†	†	†
57		†	†	†	†	†	†	†	†	†
58		†	†	†	†	†	†	†	†	†
59		†	†	†	†	†	†	†	†	†
60		†	†	†	†	†	†	†	†	†
61		†	†	†	†	†	†	†	†	†
62		†	†	†	†	†	†	†	†	†
63		†	†	†	†	†	†	†	†	†
64		†	†	†	†	†	†	†	†	†
65		†	†	†	†	†	†	†	†	†
66		†	†	†	†	†	†	†	†	†
67		†	†	†	†	†	†	†	†	†
68		†	†	†	†	†	†	†	†	†
69		†	†	†	†	†	†	†	†	†
70		†	†	†	†	†	†	†	†	†
71		†	†	†	†	†	†	†	†	†
72		†	†	†	†	†	†	†	†	†
73		†	†	†	†	†	†	†	†	†
74		†	†	†	†	†	†	†	†	†
75		†	†	†	†	†	†	†	†	†
76		†	†	†	†	†	†	†	†	†
77		†	†	†	†	†	†	†	†	†
78		†	†	†	†	†	†	†	†	†
79		†	†	†	†	†	†	†	†	†
80		†	†	†	†	†	†	†	†	†
81		†	†	†	†	†	†	†	†	†
82		†	†	†	†	†	†	†	†	†
83		†	†	†	†	†	†	†	†	†
84		†	†	†	†	†	†	†	†	†
85		†	†	†	†	†	†	†	†	†
86		†	†	†	†	†	†	†	†	†
87		†	†	†	†	†	†	†	†	†
88		†	†	†	†	†	†	†	†	†
89		†	†	†	†	†	†	†	†	†
90		†	†	†	†	†	†	†	†	†
91		†	†	†	†	†	†	†	†	†
92		†	†	†	†	†	†	†	†	†
93		†	†	†	†	†	†	†	†	†
94		†	†	†	†	†	†	†	†	†
95		†	†	†	†	†	†	†	†	†
96		†	†	†	†	†	†	†	†	†
97		†	†	†	†	†	†	†	†	†
98		†	†	†	†	†	†	†	†	†
99		†	†	†	†	†	†	†	†	†
100		†	†	†	†	†	†	†	†	†



ANNUAL FORM No. IV.

OF THE PUNJAB PROVINCE DURING THE YEAR 1933.															
27	Karnal Civil Line	..	..	..	..	..	..	..	..	..	..	..	..	..	..
28	Rohtak	..	6	2	6	10	5	10	25	4	4	..	..	..	..
29	Thanesar	..	6	6	16	11	7	11	20	4	4	..	..	..	..
30	Delhi	..	21	16	47	16	11	20	50	10	4	..	..	..	..
31	Delhi	..	61	51	121	57	45	80	130	41	27	..	..	..	..
32	Faridkot	..	60	51	121	57	45	80	130	41	27	..	..	..	..
33	Karnal	..	46	51	63	42	33	60	124	24	14	..	..	..	..
34	Karnal	..	57	55	85	54	37	63	103	27	23	..	..	..	..
35	Karnal District	..	..	..	..	..	..	..	..	..	..	..	..	..	..
36	Thanesar (Ghannoh)	..	3	3	7	2	3	6	11	7	5	..	..	..	..
37	Rohtak	..	9	8	14	5	7	12	18	11	10	..	..	..	..
38	Faridkot	..	14	14	18	8	7	18	27	12	12	..	..	..	..
39	Rohtak	..	21	21	24	16	20	24	30	22	22	..	..	..	..
40	Faridkot	..	27	27	32	22	27	32	38	28	28	..	..	..	..
41	Thanesar	..	32	32	37	25	32	37	42	32	32	..	..	..	..
42	Rohtak	..	37	37	42	30	37	42	48	37	37	..	..	..	..
43	Faridkot	..	42	42	48	35	42	48	54	42	42	..	..	..	..
44	Thanesar	..	47	47	52	40	47	52	58	47	47	..	..	..	..
45	Rohtak	..	52	52	58	45	52	58	64	52	52	..	..	..	..
46	Faridkot	..	57	57	62	50	57	62	68	57	57	..	..	..	..
47	Thanesar	..	62	62	67	55	62	67	72	62	62	..	..	..	..
48	Rohtak	..	67	67	72	60	67	72	78	67	67	..	..	..	..
49	Faridkot	..	72	72	78	65	72	78	84	72	72	..	..	..	..
50	Thanesar	..	77	77	82	70	77	82	88	77	77	..	..	..	..
51	Rohtak	..	82	82	87	75	82	87	92	82	82	..	..	..	..
52	Faridkot	..	87	87	92	80	87	92	98	87	87	..	..	..	..
53	Thanesar	..	92	92	97	85	92	97	102	92	92	..	..	..	..
54	Rohtak	..	97	97	102	90	97	102	108	97	97	..	..	..	..
55	Faridkot	..	102	102	108	95	102	108	114	102	102	..	..	..	..
56	Thanesar	..	107	107	112	100	107	112	118	107	107	..	..	..	..
57	Rohtak	..	112	112	117	105	112	117	122	112	112	..	..	..	



## DEATHS REGISTERED ACCORDING TO AGE IN THE DISTRICTS (RURAL CIRCLES)

1	2	3															
Number.	B.—TOWNS.	NOT EXCEEDING ONE MONTH.						Total.	UNDER ONE YEAR.								
		Males.			Females.				Over one month and not exceeding six months.			Over six months and not exceeding twelve months.			Total.		
		Under one week.	Over one week.	Total.	Under one week.	Over one week.	Total.		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	HISSAR DISTRICT.																
1	Hissar .. ..	22	23	45	16	22	38	83	44	44	88	48	44	92	137	126	263
2	Hansi .. ..	10	12	22	13	13	26	48	38	34	72	42	33	75	102	93	195
3	Bhiwani .. ..	32	36	68	24	24	48	116	90	77	167	90	78	168	248	203	451
4	Sirsa .. ..	7	7	14	2	4	6	20	36	33	69	34	35	69	84	74	158
5	Budhlada .. ..	..	..	..	..	..	..	..	1	1	2	2	..	2	3	1	4
	ROHTAK DISTRICT.																
6	Rohtak .. ..	46	26	72	33	17	50	122	42	34	76	49	38	87	163	122	285
7	Jhajjar .. ..	16	12	28	19	10	29	57	32	17	49	22	22	44	82	68	150
8	Beri .. ..	14	7	21	12	8	20	41	21	14	35	16	8	24	58	42	100
9	Gohana .. ..	9	7	16	4	4	8	24	9	5	14	8	6	14	33	19	52
10	Bahadurgarh .. ..	12	12	24	12	5	17	41	17	15	32	9	11	20	50	43	93
11	Sonepat .. ..	32	14	46	15	16	31	77	36	20	56	23	28	51	105	79	184
12	Mehm .. ..	10	4	14	8	1	9	23	22	10	32	7	9	16	43	28	71
13	Rohtak Civil Line .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	GURGAON DISTRICT.																
14	Rewari .. ..	38	27	65	26	23	49	114	68	45	113	40	35	75	173	129	302
15	Palwal .. ..	17	17	34	21	18	39	73	32	32	64	22	23	45	88	94	182
16	Firozpur Jhirka .. ..	14	4	18	6	3	9	27	11	12	23	9	12	21	38	33	71
17	Hodal .. ..	8	3	11	5	2	7	18	13	12	25	9	5	14	33	24	57
18	Ballabgarh .. ..	7	1	8	2	2	4	12	11	5	16	3	11	14	22	20	42
19	Faridabad .. ..	3	1	4	3	3	6	10	9	10	19	6	5	11	19	21	40
20	Hidayatpur Chhaonni .. ..	4	3	7	2	2	4	11	7	6	13	6	4	10	20	14	34
	KARNAL DISTRICT.																
21	Karnal .. ..	57	25	82	54	27	81	163	37	32	69	19	21	40	138	134	272
22	Kaithal .. ..	48	21	69	42	23	65	134	24	14	38	12	14	26	105	93	198
23	Panipat .. ..	80	51	131	57	42	99	230	42	39	81	27	29	56	200	167	367
24	Shahabad .. ..	31	16	47	18	11	29	76	12	4	16	8	3	11	67	36	103
25	Thanesar .. ..	8	10	18	11	7	18	36	4	7	11	4	..	4	26	25	51
26	Pundri .. ..	6	2	8	10	5	15	23	..	..	..	..	1	1	8	16	24
27	Karnal Civil Line .. ..	..	..	..	3	1	4	4	3	..	3	..	..	..	3	4	7



IV.

D TOWNS OF THE PUNJAB PROVINCE DURING THE YEAR 1933.

4	5	6	7	8	9	10	11	12	13	14										
ONE AND UNDER FIVE YEARS.	FIVE AND UNDER TEN YEARS.	TEN AND UNDER FIFTEEN YEARS.	FIFTEEN AND UNDER TWENTY YEARS.	TWENTY AND UNDER THIRTY YEARS.	THIRTY AND UNDER FORTY YEARS.	FORTY AND UNDER FIFTY YEARS.	FIFTY AND UNDER SIXTY YEARS.	SIXTY YEARS AND UPWARDS.	TOTAL (ALL AGES).											
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Number.										
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
14	14	25	19	24	24	34	33	42	46	60	60	57	60	29	37	8	5	430	424	1
6	12	10	13	20	21	26	31	28	31	35	41	34	38	21	16	5	5	287	301	2
20	27	30	35	39	52	45	63	60	73	74	91	83	88	66	80	21	38	686	750	3
8	10	14	11	16	17	23	22	20	28	28	34	21	29	11	16	2	2	227	243	4
3	2	..	1	1	..	..	1	..	..	..	..	2	1	..	..	..	..	9	6	5
101	89	18	16	8	11	8	18	22	24	20	17	16	19	22	17	36	26	414	359	6
50	59	4	5	6	2	4	4	8	5	6	9	11	10	13	9	15	18	199	189	7
47	56	3	4	2	5	3	4	5	13	2	7	5	6	6	5	21	16	152	158	8
32	29	3	5	..	8	..	1	6	7	3	4	7	7	3	5	7	12	94	97	9
44	32	3	9	1	8	3	5	7	5	6	9	5	7	9	5	22	22	150	145	10
56	38	6	10	3	8	3	8	15	21	6	14	6	15	4	12	22	28	226	233	11
27	13	2	2	1	1	4	3	4	6	2	6	11	3	4	3	14	17	112	82	12
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	13
92	113	8	6	10	14	8	16	21	40	27	28	26	21	13	12	42	45	420	424	14
47	53	2	3	5	6	10	9	16	18	13	24	18	8	6	5	24	18	229	238	15
20	22	..	1	..	3	3	..	5	5	7	7	2	2	4	2	7	5	86	80	16
22	14	3	3	4	..	5	4	9	11	5	5	8	7	1	3	13	10	103	81	17
20	15	1	..	3	1	3	4	5	4	3	4	5	1	..	6	7	4	69	59	18
12	11	3	..	1	1	4	..	6	5	5	3	2	5	3	1	5	6	60	53	19
14	14	..	2	1	1	3	3	4	4	6	1	2	4	3	3	4	3	57	49	20
23	13	13	10	12	11	7	6	4	3	1	3	20	22	59	61	93	103	370	366	21
14	12	9	13	9	8	3	6	4	4	2	5	9	16	30	28	72	66	257	251	22
29	16	21	15	20	14	7	19	4	16	5	12	29	51	75	72	107	120	497	502	23
13	2	9	6	5	5	4	1	1	..	1	2	10	4	21	23	55	42	186	121	24
5	8	4	5	3	..	..	3	1	..	1	..	2	4	8	9	24	15	74	69	25
3	4	2	2	1	1	1	..	..	..	..	..	2	3	13	8	4	12	34	46	26
3	2	1	1	..	..	..	1	..	..	..	1	..	1	8	5	1	2	16	17	27



## DEATHS REGISTERED ACCORDING TO AGE IN THE DISTRICTS (RURAL CIRCLES),

1	2	3															
Number.	B.—TOWNS.	NOT EXCEEDING ONE MONTH.							UNDER ONE YEAR.								
		Males.			Females.				Over one month and not exceeding six months.			Over six months and not exceeding twelve months.			Total.		
		Under one week.	Over one week.	Total.	Under one week.	Over one week.	Total.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	AMBALA DISTRICT.																
28	Ambala ..	30	29	59	24	38	62	121	40	41	81	24	33	57	123	136	259
29	Jagadhri ..	13	10	23	15	18	33	56	25	21	46	30	26	56	78	80	158
30	Barya ..	3	4	7	5	7	12	19	8	7	15	2	8	10	17	27	44
31	Sadhaura ..	7	9	16	2	6	8	24	12	9	21	12	12	24	40	29	69
32	Rupar ..	7	12	19	6	6	12	31	16	3	19	17	9	26	52	24	76
33	Kalka ..	3	3	6	7	4	11	17	10	4	14	12	3	15	28	18	46
34	Ambala Civil Line ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
35	Sanawar Civil Line ..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	1
36	Ambala Cantonment..	51	46	97	47	31	78	175	52	53	105	65	43	108	214	174	388
37	Kasauli Cantonment..	1	..	1	1	..	1	2	1	..	1	1	1	2	3	2	5
	SIMLA DISTRICT.																
38	Simla ..	39	5	44	32	7	39	83	21	13	34	10	12	22	75	64	139
39	Dagshai Cantonment..	3	2	5	2	2	4	9	2	1	3	..	..	..	7	5	12
40	Subathu Cantonment ..	..	..	..	..	..	..	..	1	2	3	2	1	3	3	3	6
41	Jutogh Cantonment ..	3	..	3	..	..	..	3	3	..	3	..	..	..	6	..	6
	KANGRA DISTRICT.																
42	Dharamsala ..	2	2	4	2	..	2	6	2	1	3	3	3	6	9	6	15
43	Dharamsala Cantonment.	2	1	3	2	1	3	6	3	..	3	11	4	15	17	7	24
	HOSHIARPUR DISTRICT.																
44	Hoshiarpur ..	10	16	26	8	9	17	43	20	18	38	24	19	43	70	54	124
45	Hariana ..	2	2	4	3	..	3	7	..	5	5	3	5	8	7	13	20
46	Dasuyah ..	2	6	8	9	1	10	18	4	7	11	8	13	21	20	30	50
47	Tanda Urmar ..	16	13	29	10	7	17	46	9	7	16	19	12	31	57	36	93
48	Miani ..	3	1	4	3	2	5	9	14	6	20	17	9	26	35	20	55
49	Garshankar ..	..	..	..	..	1	1	1	..	1	1	..	1	1	..	3	3
50	Hoshiarpur Civil Line ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	JULLUNDUR DISTRICT.																
51	Jullundur ..	74	47	121	72	47	119	240	78	65	143	82	84	166	281	268	549
52	Kartarpur ..	20	10	30	15	10	25	55	8	9	17	16	23	39	54	57	111
53	Banga ..	8	3	11	2	5	7	18	5	6	11	7	6	13	23	19	42
54	Rahon ..	7	12	19	3	4	7	26	6	5	11	9	6	15	34	18	52
55	Phillaur ..	9	4	13	7	12	19	32	5	7	12	7	9	16	25	35	60
56	Nurmahal ..	1	8	9	6	6	12	21	11	4	15	16	10	26	36	26	62
57	Nakodar ..	14	5	19	2	14	16	35	9	9	18	17	17	34	45	42	87
58	Nawanshahr ..	7	13	20	2	6	8	28	12	6	18	9	8	17	41	22	63
59	Jullundur Cantonment	11	1	12	9	2	11	23	4	4	8	7	3	10	23	18	41



## No. IV—CONTINUED.

AND TOWNS OF THE PUNJAB PROVINCE DURING THE YEAR 1933.

4		5		6		7		8		9		10		11		12		13		14
ONE AND UNDER FIVE YEARS.		FIVE AND UNDER TEN YEARS.		TEN AND UNDER FIFTEEN YEARS.		FIFTEEN AND UNDER TWENTY YEARS.		TWENTY AND UNDER THIRTY YEARS.		THIRTY AND UNDER FORTY YEARS.		FORTY AND UNDER FIFTY YEARS.		FIFTY AND UNDER SIXTY YEARS.		SIXTY YEARS AND UPWARDS.		TOTAL (ALL AGES).		
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Number.
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
40	40	11	9	4	9	5	14	21	30	37	46	56	50	29	39	46	43	372	416	28
11	17	6	14	2	5	5	3	6	21	20	23	26	36	18	23	30	20	202	242	29
3	4	1	2	1	..	2	..	2	3	1	1	7	4	3	13	10	6	47	60	30
11	11	4	2	1	..	..	3	4	6	11	2	16	13	17	25	13	16	117	107	31
9	12	6	5	1	..	3	..	..	3	7	4	16	15	18	15	16	18	128	96	32
3	5	2	3	2	1	..	1	..	1	9	4	5	7	20	10	7	15	76	65	33
..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	2	..	34
..	1	1	..	1	..	..	..	..	..	1	..	..	..	1	..	1	..	6	1	35
36	37	20	17	17	31	11	32	50	48	63	51	52	84	48	43	43	76	534	593	36
1	1	1	1	2	..	..	1	..	1	1	..	8	4	6	3	2	5	24	18	37
32	38	2	11	5	9	13	11	38	36	36	17	22	4	15	6	26	14	264	210	38
3	2	..	..	..	..	1	1	..	1	..	..	2	..	1	..	1	2	15	11	39
1	..	..	..	..	..	..	..	2	1	2	2	2	1	2	..	3	2	15	9	40
..	1	..	1	..	..	..	1	2	2	..	..	..	..	..	..	3	1	11	6	41
3	..	..	1	..	..	..	1	1	7	4	3	1	2	..	..	6	4	24	24	42
1	1	..	1	1	..	..	1	..	3	..	..	..	..	..	1	1	1	20	15	43
43	49	8	12	1	9	1	12	25	27	5	14	12	11	18	13	57	33	240	234	44
8	6	1	1	1	1	1	..	..	2	5	3	3	2	3	2	12	9	41	39	45
23	22	1	9	4	4	4	6	4	6	2	4	6	4	9	4	19	13	92	102	46
26	26	6	7	4	3	4	3	5	8	4	8	..	5	5	2	21	20	132	118	47
35	31	7	6	3	4	4	2	4	4	4	4	4	6	6	6	14	9	116	92	48
3	2	..	..	..	1	..	..	..	..	3	2	..	..	..	..	9	6	15	14	40
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	50
190	171	26	22	18	29	32	35	45	71	31	33	50	20	36	22	164	122	873	793	51
33	38	3	3	4	1	4	7	4	9	5	3	6	3	9	7	39	19	161	147	52
10	19	1	2	..	..	1	2	..	4	1	2	4	11	7	2	9	8	56	69	53
18	25	7	5	2	2	1	3	4	7	7	1	7	8	7	2	19	14	106	85	54
14	7	..	6	3	2	1	2	4	14	4	5	2	..	8	5	12	7	73	83	55
21	20	2	1	1	..	4	4	3	6	4	2	5	1	4	2	31	12	111	74	56
48	38	7	7	3	3	2	4	4	5	1	4	3	1	2	5	29	22	144	131	57
24	22	2	3	3	..	3	3	3	3	2	1	5	3	3	4	17	4	103	65	58
2	7	..	7	1	1	..	2	3	8	2	7	3	3	5	2	12	9	51	64	59



## DEATHS REGISTERED ACCORDING TO AGE IN THE DISTRICTS (RURAL CIRCLES).

1	2	3															
Number.	B.—TOWNS.	NOT EXCEEDING ONE MONTH.							UNDER ONE YEAR.								
		Males.			Females.				Over one month and not exceeding six months.			Over six months and not exceeding twelve months.			Total.		
		Under one week.	Over one week.	Total.	Under one week.	Over one week.	Total.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<b>LUDHIANA DISTRICT.</b>																	
60	Ludhiana ..	72	53	125	61	40	101	226	87	65	152	78	72	150	290	238	528
61	Jagraon ..	42	23	65	21	13	34	99	24	18	42	14	21	35	103	73	176
62	Raekot ..	20	10	30	7	8	15	45	14	13	27	12	12	24	56	40	96
63	Khanna ..	12	3	15	3	5	8	23	7	5	12	3	6	9	25	19	44
64	Ludhiana Civil Line ..	2	1	3	..	2	2	5	1	..	1	..	..	..	4	2	6
<b>FEROZEPORE DISTRICT.</b>																	
65	Ferozepore ..	33	22	55	21	17	38	93	29	22	51	32	31	63	116	91	207
66	Zira ..	8	2	10	7	4	11	21	11	6	17	5	5	10	26	22	48
67	Dharmkot ..	8	6	14	11	8	19	33	5	5	10	10	8	18	29	32	61
68	Muktsar ..	17	8	25	7	16	23	48	19	13	32	12	15	27	56	51	107
69	Fazilka ..	18	24	42	19	11	30	72	30	21	51	37	25	62	109	76	185
70	Moga ..	18	12	30	19	10	29	59	21	15	36	11	13	24	62	57	119
71	Abohar ..	6	5	11	7	2	9	20	6	6	12	14	9	23	31	24	55
72	Jalalabad ..	7	9	16	3	4	7	23	7	9	16	5	2	7	28	18	46
73	Ferozepore Cantonment.	8	19	27	10	16	26	53	25	18	43	15	8	23	67	52	119
<b>LAHORE DISTRICT.</b>																	
74	Lahore ..	160	198	358	145	142	287	645	464	404	868	474	459	933	1,296	1,150	2,446
75	Chunian ..	2	2	4	4	3	7	11	15	10	25	19	22	41	38	39	77
76	Kasur ..	24	31	55	23	20	43	98	64	41	105	59	49	108	178	133	311
77	Khem Karan ..	3	8	11	5	4	9	20	19	17	36	22	25	47	52	51	103
78	Patti ....	7	8	15	6	12	18	33	39	18	57	32	26	58	86	62	148
79	Baghbanpura Bhogiwal	5	6	11	5	2	7	18	17	17	34	20	26	46	48	50	98
80	Ichhra ..	2	2	4	3	1	4	8	4	7	11	6	3	9	14	14	28
81	Pattoki Mandi ..	4	..	4	1	2	3	7	12	12	24	17	18	35	33	33	66
82	Sur Singh ..	6	5	11	3	3	6	17	14	11	25	15	17	32	40	34	74
83	Lahore Cantonment ..	3	1	4	1	2	3	7	6	10	16	7	5	12	17	18	35
<b>AMRITSAR DISTRICT.</b>																	
84	Amritsar ..	397	240	637	373	229	602	1,239	245	223	468	263	260	523	1,145	1,085	2,230
85	Majitha ..	8	11	19	3	1	4	23	9	2	11	8	17	25	36	23	59
86	Jandiala ..	3	5	8	10	3	13	21	7	4	11	9	12	21	24	29	53
87	Tarn Taran ..	10	4	14	10	6	16	30	5	..	5	10	12	22	29	28	57
88	Sultanwind ..	11	14	25	8	5	13	38	7	7	14	10	3	13	42	23	65
89	Amritsar Cantonment	..	2	2	..	..	..	2	1	1	2	..	..	..	3	1	4



## No. IV—CONTINUED.

AND TOWNS OF THE PUNJAB PROVINCE DURING THE YEAR 1933.

4		5		6		7		8		9		10		11		12		13		14
ONE AND UNDER FIVE YEARS.		FIVE AND UNDER TEN YEARS.		TEN AND UNDER FIFTEEN YEARS.		FIFTEEN AND UNDER TWENTY YEARS.		TWENTY AND UNDER THIRTY YEARS.		THIRTY AND UNDER FORTY YEARS.		FORTY AND UNDER FIFTY YEARS.		FIFTY AND UNDER SIXTY YEARS.		SIXTY YEARS AND UPWARDS.		TOTAL (ALL AGES).		
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Number.
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
97	75	61	65	41	28	50	48	46	49	42	57	70	72	77	53	109	119	883	804	60
37	38	7	9	11	3	12	8	6	5	7	16	5	12	23	28	63	47	274	239	61
29	17	1	..	3	5	3	3	3	5	1	3	..	10	3	11	39	32	138	126	62
15	5	3	2	..	2	3	..	2	2	..	1	1	4	6	1	11	17	66	53	63
4	..	..	..	..	..	..	2	..	..	2	1	..	2	2	1	4	3	16	11	64
65	47	17	15	8	10	11	9	28	19	19	16	24	20	34	15	55	44	377	286	65
12	14	1	1	..	2	2	4	2	4	4	..	6	6	8	1	10	7	71	61	66
20	13	4	2	..	4	4	4	6	8	5	6	5	2	3	5	18	12	94	88	67
24	33	3	4	2	..	2	3	6	7	9	4	6	2	9	11	23	11	140	126	68
66	48	5	9	6	3	7	9	19	22	14	10	12	13	11	11	18	20	267	221	69
29	26	4	4	2	10	6	8	10	7	16	5	12	6	10	9	28	23	179	155	70
24	14	1	4	3	..	..	1	3	7	1	..	4	1	6	3	8	6	81	60	71
16	12	1	..	1	..	2	2	5	4	1	2	..	2	5	2	7	4	66	46	72
43	48	4	5	3	8	10	12	14	26	19	15	8	13	14	11	29	26	211	216	73
594	528	380	400	191	214	153	175	159	156	200	205	312	295	495	425	711	544	4,491	4,092	74
20	34	..	3	3	2	3	6	5	5	3	3	2	3	8	6	18	16	100	117	75
96	101	16	11	12	19	16	24	21	19	16	14	18	25	26	29	93	69	492	444	76
34	34	3	1	2	3	2	4	1	1	2	3	4	6	2	2	14	11	116	116	77
58	45	7	3	5	3	1	10	4	5	7	8	4	2	6	4	21	13	199	155	78
30	34	4	1	3	2	2	1	5	5	6	3	2	..	10	3	9	7	119	106	79
15	14	2	2	..	1	..	..	2	1	3	3	2	1	1	1	15	5	54	42	80
23	16	2	2	1	2	4	1	2	1	2	1	4	..	1	2	10	5	82	63	81
13	11	3	2	..	2	2	..	..	1	3	1	2	1	4	2	20	19	87	73	82
13	6	..	2	1	3	2	3	..	4	..	3	1	..	..	..	3	4	37	42	83
704	775	158	148	133	168	132	179	187	270	150	154	163	111	188	132	446	425	3,406	3,447	84
19	19	3	3	3	2	3	1	4	9	5	2	2	4	2	1	10	11	87	75	85
24	21	6	4	..	3	2	9	4	6	6	7	2	1	6	4	13	14	87	98	86
11	15	3	..	1	2	3	4	2	2	4	3	4	3	2	1	8	2	67	60	87
7	11	1	5	5	2	4	3	6	10	2	1	5	3	5	3	10	9	87	70	88
1	1	1	..	..	..	..	..	..	1	1	..	..	..	..	1	1	1	7	5	89



## DEATHS REGISTERED ACCORDING TO AGE IN THE DISTRICTS (RURAL CIRCLES).

1	2	3															
Number.	B.—TOWNS.	NOT EXCEEDING ONE MONTH.						Total.	UNDER ONE YEAR.								
		Males.			Females.				Over one month and not exceeding six months.			Over six months and not exceeding twelve months.			Total.		
		Under one week.	Over one week.	Total.	Under one week.	Over one week.	Total.		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	GURDASPUR DISTRICT.																
90	Gurdaspur ..	8	5	13	9	12	21	34	10	14	24	8	12	20	31	47	78
91	Dina Nanagar ..	1	5	6	..	5	5	11	3	4	7	3	6	9	12	15	27
92	Pathankot ..	17	11	28	17	9	26	54	12	10	22	9	18	27	49	54	103
93	Dalhousie ..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	1
94	Batala ..	33	33	66	27	26	53	119	41	43	84	47	40	87	154	136	290
95	Dera Nanak ..	6	3	9	10	4	14	23	6	5	11	12	4	16	27	23	50
96	Fatehgarh ..	3	2	5	..	4	4	9	3	2	5	1	5	6	9	11	20
97	Qadian ..	1	..	1	1	..	1	2	..	..	..	1	1	2	2	2	4
98	Gurdaspur Civil Line ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
99	Dalhousie Cantonment ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
100	Bakloh Cantonment ..	..	2	2	1	1	2	4	7	5	12	6	4	10	15	11	26
	SIALKOT DISTRICT.																
101	Sialkot ..	68	54	122	54	45	99	221	106	96	202	93	73	166	321	268	589
102	Daska ..	2	5	7	4	5	9	16	2	3	5	..	1	1	9	13	22
103	Pasrur ..	7	7	14	9	8	17	31	6	8	14	12	11	23	32	36	68
104	Narowal ..	9	13	22	4	11	15	37	17	11	28	13	14	27	52	40	92
105	Chawinda ..	5	6	11	7	4	11	22	5	4	9	6	7	13	22	22	44
106	Sialkot Cantonment ..	9	7	16	5	5	10	26	7	9	16	4	8	12	27	27	54
	GUJRANWALA DISTRICT.																
107	Gujranwala ..	39	30	69	29	26	55	124	63	41	104	60	42	102	192	138	330
108	Wazirabad ..	13	4	17	6	8	14	31	10	16	26	13	9	22	40	39	79
109	Eminabad ..	2	4	6	3	5	8	14	4	7	11	6	11	17	16	26	42
110	Akalgah ..	6	2	8	1	2	3	11	7	6	13	4	5	9	19	14	33
111	Hafizabad ..	14	6	20	3	7	10	30	13	8	21	18	8	26	51	26	77
	SHEIKHUPURA DISTRICT.																
112	Sangla ..	9	..	9	4	..	4	13	3	2	5	4	..	4	16	6	22
113	Sharakpur ..	3	4	7	7	12	19	26	6	5	11	7	4	11	20	28	48
114	Nankana Sahib ..	7	7	14	7	5	12	26	2	4	6	4	9	13	20	25	45
115	Shahdara ..	7	..	7	5	3	8	15	7	7	14	8	10	18	22	25	47
116	Sheikhupura ..	6	6	12	8	3	11	23	10	11	21	9	8	17	31	30	61
	GUJRAT DISTRICT.																
117	Gujrat ..	25	29	54	31	28	59	113	48	34	82	31	48	79	133	141	274
118	Jalalpur ..	6	16	22	10	11	21	43	10	13	23	11	12	23	43	46	89
119	Kunjah ..	7	8	15	3	5	8	23	10	8	18	7	7	14	32	23	55
120	Dinga ..	1	4	5	3	6	9	14	3	4	7	1	3	4	9	16	25
121	Gujrat Civil Line ..	1	..	1	..	..	..	1	2	..	2	..	..	..	3	..	3



## o. IV—CONTINUED.

AND TOWNS OF THE PANJAB PROVINCE DURING THE YEAR 1933.

4		5		6		7		8		9		10		11		12		13		14
ONE AND UNDER FIVE YEARS.		FIVE AND UNDER TEN YEARS.		TEN AND UNDER FIFTEEN YEARS.		FIFTEEN AND UNDER TWENTY YEARS.		TWENTY AND UNDER THIRTY YEARS.		THIRTY AND UNDER FORTY YEARS.		FORTY AND UNDER FIFTY YEARS.		FIFTY AND UNDER SIXTY YEARS.		SIXTY YEARS AND UPWARDS.		TOTAL (ALL AGES).		
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Number.
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
18	12	4	3	2	1	4	3	1	6	4	5	8	3	3	..	15	9	90	89	90
5	11	1	..	..	..	..	..	7	4	3	2	5	1	7	2	9	4	49	39	91
20	31	5	3	2	7	6	6	14	5	14	8	9	2	8	7	15	10	142	133	92
..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	4	..	93
103	141	21	27	15	10	8	22	21	27	19	15	15	9	25	20	63	58	444	465	94
18	21	1	..	2	1	3	1	..	6	1	1	3	2	4	3	12	6	71	64	95
11	18	6	2	1	3	2	2	..	4	2	..	..	1	2	..	8	5	41	46	96
2	7	2	..	2	1	..	2	1	..	..	2	2	1	4	..	3	4	18	19	97
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	98
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	99
5	3	..	1	1	..	..	1	1	2	1	3	..	1	..	..	2	3	25	25	100
150	159	60	52	42	35	46	41	127	127	106	103	89	84	70	65	82	86	1,093	1,020	101
15	9	3	1	2	..	..	..	1	3	1	4	1	..	2	1	5	4	39	35	102
21	17	..	1	6	2	3	4	9	8	8	4	2	3	6	2	19	9	106	86	103
28	31	11	6	4	3	3	3	14	11	3	6	7	4	4	3	17	5	143	115	104
24	16	3	5	1	1	..	1	11	8	4	5	2	3	3	1	15	12	85	74	105
17	10	2	2	1	3	4	7	9	11	5	3	4	2	8	3	10	10	87	78	106
129	126	50	35	37	34	26	33	35	37	33	29	37	31	38	32	40	42	617	537	107
43	49	16	6	11	7	8	7	14	8	12	10	13	9	13	9	13	12	183	156	108
18	24	3	5	1	5	6	3	2	3	5	2	7	5	7	4	3	7	68	84	109
10	7	1	..	5	1	..	2	8	1	..	4	3	1	2	4	6	4	54	38	110
37	30	11	6	9	5	10	6	8	9	8	17	11	11	10	14	14	11	169	135	111
13	6	2	2	..	..	2	1	2	2	3	2	1	..	4	1	1	..	44	20	112
12	19	10	2	1	2	..	1	2	4	3	3	4	7	5	5	14	11	71	82	113
13	21	5	5	2	5	..	1	2	5	..	..	1	..	3	1	5	1	51	64	104
18	23	6	5	1	3	2	4	6	5	2	4	2	4	1	2	9	7	69	82	115
33	29	10	4	2	3	5	4	6	8	1	12	5	6	4	1	9	7	106	104	116
125	121	23	26	10	36	11	23	21	60	17	24	12	15	27	21	73	67	452	534	117
34	42	5	7	2	2	4	6	6	15	8	7	5	3	7	4	31	20	145	152	118
35	29	10	1	5	7	3	4	3	3	4	3	4	3	6	4	18	10	120	87	119
18	14	2	2	4	4	1	2	2	8	4	2	2	3	4	2	10	9	56	62	120
7	6	2	1	..	1	..	3	4	..	..	1	3	..	1	..	5	2	25	14	121



## DEATHS REGISTERED ACCORDING TO AGE IN THE DISTRICT (RURAL CIRCLES).

1	2	3															
Number.	B.—TOWNS.	NOT EXCEEDING ONE MONTH.							UNDER ONE YEAR.								
		Males.			Females.			Total.	Over one month and not exceeding six months.			Over six months and not exceeding twelve months.			Total.		
		Under one week.	Over one week.	Total.	Under one week.	Over one week.	Total.		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	SHAHPUR DISTRICT.																
122	Shahpur ..	12	7	19	6	2	8	27	20	19	39	8	6	14	47	33	80
123	Sahiwal ..	15	7	22	20	7	27	49	8	8	16	7	1	8	37	36	73
124	Bhera ..	25	11	36	23	9	32	68	39	41	80	23	30	53	98	103	201
125	Miani ..	9	5	14	4	2	6	20	14	11	25	12	13	25	40	30	70
126	Khushab ..	4	11	15	6	13	19	34	24	11	35	13	14	27	52	44	96
127	Sargodha ..	10	12	22	8	10	18	40	14	21	35	11	9	20	47	48	95
128	Shahpur Civil Station ..	..	2	2	..	2	2	4	3	3	6	4	2	6	9	7	16
	JHLEUM DISTRICT.																
129	Jhelum ..	11	17	28	9	10	19	47	15	15	30	10	9	19	53	43	96
130	Pind Dadan Khan ..	9	20	29	9	8	17	46	33	19	52	13	7	20	75	43	118
131	Chakwal ..	6	3	9	6	6	12	21	10	9	19	4	4	8	23	25	48
132	Jhelum Cantonment..	1	..	1	1	..	1	2	1	..	1	1	..	1	3	1	4
	RAWALPINDI DISTRICT.																
133	Rawalpindi ..	66	60	126	63	58	121	247	86	77	163	99	100	199	311	298	609
134	Murree ..	1	4	5	1	3	4	9	..	6	6	3	..	3	8	10	18
135	Murree Cantonment ..	2	..	2	..	..	..	2	..	..	..	..	1	1	2	1	3
136	Rawalpindi Cantonment	5	5	10	7	8	15	25	10	12	22	7	7	14	27	34	61
	ATTOCK DISTRICT.																
137	Pindigheb ..	3	..	3	1	1	2	5	18	7	25	15	5	20	36	14	50
138	Hazro ..	1	..	1	..	..	..	1	4	10	14	20	13	33	25	23	48
139	Cambelpore ..	1	..	1	1	1	2	3	4	..	4	5	2	7	10	4	14
140	Cambelpore Cantonment.	..	..	..	..	..	..	..	..	..	..	1	..	1	1	..	1
	MIANWALI DISTRICT.																
141	Mianwali ..	11	6	17	9	6	15	32	13	11	24	11	6	17	41	32	73
142	Bhakkar ..	23	12	35	8	8	16	51	12	20	32	7	9	16	54	45	99
143	Isa Khel ..	3	5	8	1	3	4	12	16	6	22	2	3	5	26	13	39
144	Kalabagh ..	15	10	25	7	8	15	40	13	7	20	6	12	18	44	34	78
	MONTGOMERY DISTRICT.																
145	Montgomery ..	8	6	14	5	3	8	22	16	5	21	6	9	15	36	22	58
146	Pakpattan ..	11	6	17	6	10	16	33	13	17	30	15	8	23	45	41	86
147	Okara ..	7	7	14	7	6	13	27	11	10	21	10	5	15	35	28	63
	LYALLPUR DISTRICT.																
148	Lyallpur ..	42	31	73	42	21	63	136	45	52	97	48	51	99	166	166	332
149	Gojra ..	3	4	7	8	9	17	24	5	3	8	9	8	17	21	28	49
150	Tandlianwala ..	7	4	11	2	2	4	15	4	8	12	8	10	18	23	22	45
151	Toba Tek Singh ..	1	6	7	..	2	2	9	1	2	3	4	2	6	12	6	18
152	Jaranwala ..	4	4	8	..	2	2	10	7	3	10	3	5	8	18	10	28
153	Kamalia ..	13	17	30	14	16	30	60	21	10	31	6	11	17	57	51	108



## C. IV—CONTINUED.

D TOWNS OF THE PUNJAB PROVINCE DURING THE YEAR 1933.

4	5	6	7	8	9	10	11	12	13	14										
ONE AND UNDER VE YEARS.	FIVE AND UNDER TEN YEARS.	TEN AND UNDER FIFTEEN YEARS.	FIFTEEN AND UNDER TWENTY YEARS.	TWENTY AND UNDER THIRTY YEARS.	THIRTY AND UNDER FORTY YEARS.	FORTY AND UNDER FIFTY YEARS.	FIFTY AND UNDER SIXTY YEARS.	SIXTY YEARS AND UPWARDS.	TOTAL (ALL AGES).											
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Number.										
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
26	31	2	5	2	1	3	4	6	5	4	8	6	8	4	5	11	12	111	112	122
12	13	3	2	4	1	..	4	4	8	8	5	8	4	5	4	16	12	97	89	123
68	94	13	10	6	2	4	8	15	18	11	10	11	10	31	12	70	42	327	309	124
26	36	7	7	4	5	3	3	4	9	1	12	4	4	7	9	15	16	111	131	125
28	62	5	10	4	6	..	2	12	15	2	5	6	6	7	8	23	10	139	168	126
45	42	8	5	5	3	4	6	15	13	15	8	7	3	10	5	12	11	168	144	127
5	8	1	1	..	..	2	2	1	3	1	..	2	1	3	..	5	3	29	25	128
34	41	7	11	1	6	5	8	13	12	6	10	11	4	7	6	21	22	158	163	129
43	28	7	11	3	5	4	9	5	17	8	10	8	8	11	13	21	15	185	159	130
9	10	2	3	3	4	1	5	4	5	4	3	8	7	6	7	24	29	84	98	131
2	1	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	1	6	4	132
125	132	57	61	59	57	53	55	47	51	69	59	78	85	89	97	126	120	1,014	1,015	133
8	4	..	..	2	4	1	1	7	2	1	..	1	..	2	..	3	2	33	23	134
1	..	..	..	..	3	..	..	1	..	..	1	..	..	..	..	..	..	4	5	135
22	16	6	..	4	3	4	7	18	21	14	6	18	6	9	3	17	9	139	105	136
33	18	15	13	4	10	6	8	8	8	5	5	5	2	5	4	35	25	152	107	137
24	16	10	6	2	4	4	7	4	4	7	8	2	4	6	6	29	10	113	88	138
3	3	3	1	1	3	1	5	7	2	1	3	2	..	6	2	5	3	39	26	139
1	1	2	..	..	..	1	1	2	..	1	..	..	..	1	1	..	2	9	5	140
22	14	6	3	7	4	4	5	11	10	4	3	5	3	6	1	12	16	118	91	141
13	24	5	5	4	3	3	5	8	12	4	11	6	4	8	3	12	12	117	124	142
19	3	7	6	2	1	5	2	5	4	4	7	5	9	7	5	9	12	89	62	143
37	27	10	7	6	5	5	2	1	9	8	7	1	3	10	9	24	16	146	119	144
19	15	20	9	18	5	10	9	10	6	6	4	6	3	1	2	6	5	132	80	145
18	23	15	14	14	16	11	11	11	12	6	7	3	2	1	1	3	2	127	129	146
13	12	14	10	16	6	9	9	6	3	3	2	2	1	..	..	5	2	103	73	147
117	118	26	24	9	12	8	10	18	29	24	29	25	11	13	13	56	29	462	441	148
20	9	2	4	4	2	1	3	4	2	3	3	2	2	3	2	4	5	64	60	149
18	13	3	..	1	1	4	3	3	..	1	..	..	1	6	2	4	4	63	46	150
7	5	..	..	..	..	1	1	1	2	1	..	1	1	..	..	3	..	26	15	151
10	16	4	..	1	2	..	..	3	5	..	3	1	2	3	3	6	3	46	44	152
36	38	7	9	3	5	4	5	1	5	3	5	5	3	9	2	25	32	150	155	153



ANNUAL FOR

DEATHS REGISTERED ACCORDING TO AGE IN THE DISTRICT

1	2	3															
		NOT EXCEEDING ONE MONTH.							UNDER ONE YEAR.								
		Males.			Females.				Over one month and not exceeding six months.			Over six months and not exceeding twelve months.			Total.		
		Under one week.	Over one week.	Total.	Under one week.	Over one week.	Total.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	JHANG DISTRICT.																
154	Jhang Maghiana ..	45	81	126	46	57	103	229	42	38	80	45	34	79	213	175	388
155	Chiniot ..	24	36	60	25	24	49	109	39	35	74	20	16	36	119	100	219
156	Ahmadpur ..	15	..	15	..	..	4	19	12	10	22	4	5	9	31	19	50
157	Shorkot ..	8	16	24	4	12	16	40	14	14	28	5	7	12	43	37	80
	MULTAN DISTRICT.																
158	Multan ..	154	138	292	147	122	269	561	172	143	315	159	151	310	623	563	1,186
159	Shujabad ..	15	4	19	9	15	24	43	12	10	22	10	14	24	41	48	89
160	Khanewal ..	4	2	6	..	1	1	7	1	..	1	1	2	3	8	3	11
161	Kahrar ..	6	7	13	4	4	8	21	2	5	7	5	5	10	20	18	38
162	Tolamba ..	5	7	12	7	7	14	26	10	5	15	7	6	13	29	25	54
163	Multan Cantonment ..	1	2	3	1	2	3	6	3	3	6	1	4	5	7	10	17
	MUZAFFARGARH DISTRICT.																
164	Muzaffargarh ..	9	7	16	6	10	16	32	8	6	14	4	2	6	28	24	52
165	Khangarh ..	7	9	16	5	9	14	30	5	7	12	4	3	7	25	24	49
166	Alipur ..	7	9	16	1	6	7	23	5	7	12	3	4	7	24	18	42
167	Leiah ..	13	11	24	10	12	22	46	15	10	25	8	7	15	47	39	86
168	Karor ..	11	6	17	6	12	18	35	5	11	16	4	3	7	26	32	58
169	Muzaffargarh Civil Line.	..	..	..	..	..	..	..	..	..	..	1	..	1	1	..	2
	DERA GHAZI KHAN DISTRICT.																
170	Dera Ghazi Khan ..	17	31	48	13	28	41	89	40	30	79	23	21	44	120	92	212
171	Jampur ..	18	17	35	13	22	35	70	18	13	31	12	18	30	65	66	131
172	Dajal ..	12	16	28	14	12	26	54	32	33	65	18	4	22	78	63	141
173	Rajanpur ..	6	11	17	6	4	10	27	18	8	26	5	11	16	40	29	69
174	Kot Mithan ..	6	2	8	3	6	9	17	7	5	12	7	3	10	22	17	39
175	Taunsa ..	2	3	5	1	2	3	8	1	1	2	2	1	3	8	5	13
	Total for Towns ..	2,824	2,309	5,133	2,377	1,993	4,370	9,503	3,631	3,033	6,664	3,301	3,099	6,400	12,065	10,502	22,567
	Ratio per mille ..	*	*	*	*	*	*	*	*	*	*	*	*	*	195.60	190.46	193.03
	Total for the Province	26,134	20,173	46,307	22,090	17,234	39,324	85,631	31,009	26,740	57,749	30,002	27,373	57,375	107,318	93,437	200,755
	Ratio per mille of population	*	*	*	*	*	*	*	*	*	*	*	*	*	195.13	189.66	192.39

\*Population  
†Calculated



## IV—CONCLUDED.

RAL CIRCLES) AND TOWNS OF THE PUNJAB PROVINCE DURING THE YEAR 1933.

4	5		6		7		8		9		10		11		12		13		14	
ONE AND UNDER TEN YEARS.	FIVE AND UNDER TEN YEARS.		TEN AND UNDER FIFTEEN YEARS.		FIFTEEN AND UNDER TWENTY YEARS.		TWENTY AND UNDER THIRTY YEARS.		THIRTY AND UNDER FORTY YEARS.		FORTY AND UNDER FIFTY YEARS.		FIFTY AND UNDER SIXTY YEARS.		SIXTY YEARS AND UPWARDS.		TOTAL (ALL AGES).			
	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Number.
9	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
89	81	30	22	6	19	6	12	18	29	19	13	14	16	25	16	78	62	498	445	154
53	49	13	16	5	13	10	7	11	24	5	8	11	9	15	16	49	29	291	271	155
17	31	14	5	4	11	2	3	4	8	2	10	6	2	6	2	17	24	103	115	156
17	19	5	4	1	1	1	1	2	6	6	4	5	2	12	2	13	9	105	85	157
40	255	97	114	54	72	49	53	54	67	43	75	74	58	92	129	156	167	1,482	1,553	158
40	37	6	4	10	4	3	8	4	5	4	5	1	7	11	9	21	17	141	144	159
5	5	2	..	2	1	1	..	..	3	2	2	..	..	..	1	1	5	21	20	160
19	15	2	2	..	3	4	1	3	4	9	3	2	1	6	2	14	12	79	61	161
15	12	6	2	1	1	1	..	..	3	1	..	2	1	3	2	4	7	62	53	162
9	3	1	3	..	..	..	2	1	..	1	..	1	..	2	2	1	5	20	28	163
10	12	2	1	4	4	2	7	1	7	2	3	2	1	3	2	5	7	59	68	164
9	7	2	2	1	2	1	3	1	5	..	3	2	2	3	1	7	1	51	50	165
13	7	2	1	2	2	..	3	..	7	2	4	1	3	4	2	17	7	65	54	166
18	20	8	7	4	2	3	10	3	20	3	6	8	8	8	3	24	15	126	130	167
10	13	5	4	3	2	1	3	1	5	3	5	6	5	6	3	6	7	67	79	168
1	..	2	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	5	2	169
20	29	8	7	2	6	4	12	17	26	14	11	16	7	11	11	33	33	245	234	170
29	24	8	5	1	2	2	3	3	17	3	7	5	9	6	9	19	20	141	162	171
19	24	4	5	2	2	2	1	4	10	3	4	5	7	6	1	13	16	136	133	172
9	9	1	2	1	1	1	4	3	4	3	4	3	1	5	2	11	5	77	61	173
6	11	..	4	2	1	..	4	2	3	2	5	2	3	4	3	5	3	45	54	174
17	5	6	1	5	2	3	..	4	3	3	2	4	6	4	5	13	12	67	41	175
031	5,963	1,786	1,721	1,190	1,352	1,168	1,482	1,811	2,306	1,766	1,870	2,063	1,911	2,487	2,137	4,763	4,076	35,130	33,320	
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
861	60,339	19,501	18,361	14,003	13,529	13,273	13,582	18,815	20,768	19,191	19,513	20,858	18,883	22,580	19,998	44,998	38,734	343,398	317,144	
89	43.18	11.53	12.64	8.91	10.57	11.03	13.76	8.42	11.16	11.44	14.96	18.03	20.78	29.66	34.73	66.54	77.47	26.66	29.64	

Table.  
the.



## ANNUAL FORM No. IV-A.

DEATH RATES OF INFANTS UNDER ONE YEAR, ACCORDING TO CLASSES IN THE DISTRICTS OF THE PUNJAB, DURING THE YEAR 1953.

MORTALITY UNDER ONE YEAR.											REMARKS.
Number.	Districts.	Muhammadians.		Hindus.		INDIAN CHRISTIANS.		OTHER CLASSES.			
		Number.	Ratios.	Number.	Ratios.	Number.	Ratios.	Number.	Ratios.		
1	2	3	4	5	6	7	8	9	10	11	
1	Hissar	1,842	175.15	4,038	168.27	..	..	..	..		
2	Rohtak	1,257	204.72	6,196	174.04	..	111.11	..	..		
3	Gurgaon	2,768	198.10	5,548	202.27	..	..	..	..		
4	Karnal	2,547	212.60	4,924	171.53	..	..	..	..		
5	Ambala	1,714	161.41	4,979	218.21	2	28.99	..	..		
6	Simla	90	439.02	161	152.03	11	297.30	7	583.33		
7	Kangra	462	319.94	4,868	173.45	..	..	..	..		
8	Hoshiarpur	2,893	195.14	5,513	175.61	12	142.86	..	..		
9	Jullundur	3,197	162.58	5,237	215.37	2	20.00	..	..		
10	Ludhiana	2,326	211.78	3,771	206.73	5	108.70	..	..		
11	Ferozepore	4,572	181.62	5,323	189.62	18	130.43	..	..		
12	Lahore	5,442	169.61	2,395	143.73	297	125.90	348	99.40		
13	Amritsar	5,417	203.68	5,487	202.56	123	173.00	88	85.82		
14	Gurdaspur	4,670	187.72	4,434	200.37	657	283.31	23	17.54		
15	Sialkot	5,599	189.39	2,750	174.16	487	150.73	6	127.66		
16	Gujranwala	6,229	246.56	2,051	299.37	737	274.18	2	303.57		
17	Sheikhpura	4,647	209.85	1,588	189.30	550	219.21	170	..		
18	Gujrat	5,855	172.68	681	128.18	10	117.65	..	..		
19	Shahpur	6,474	233.52	767	153.65	85	169.32	26	194.03		
20	Jhelum	3,659	189.79	2,559	125.48	1	71.43	..	..		
21	Rawalpindi	3,816	183.19	718	182.33	20	235.29	8	285.71		
22	Attock	2,380	127.98	41	30.71	..	..	..	..		
23	Mianwali	3,815	238.04	645	248.08	3	300.00	..	..		
24	Montgomery	6,873	238.80	698	64.19	175	185.19	156	252.43		
25	Lyallpur	5,795	165.58	3,342	192.47	536	224.46	562	153.85		
26	Jhang	4,624	203.18	1,038	206.44	1	30.30	2	107.41		
27	Multan	7,596	214.51	2,264	272.41	44	123.25	87	..		
28	Muzaffargarh	4,095	217.91	505	173.84	..	..	..	..		
29	Dera Ghazi Khan	3,402	205.91	694	220.28	..	..	8	160.00		
Total		113,927	190.74	81,425	186.06	3,778	201.27	1,625	227.37		

? figures incorrect due to misclassification.



DEATHS REGISTERED BY SEXES AND CLASSES ACCORDING TO SPECIFIED AGE PERIODS IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1933.									
ANNUAL FORM No. V.									



1	2	3									
Number.	Districts.	POPULATION ACCORDING TO THE CENSUS OF 1931.									
		Muhammadans.		Hindus.		Indian Christians.		Other Classes.		Total.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
		3	4	5	6	7	8	9	10	11	12
1	Hissar ..	135,840	117,944	349,257	295,320	583	524	10	1	485,690	413,780
2	Rohtak ..	72,820	65,060	357,583	305,351	2,452	2,355	..	..	432,855	372,766
3	Gurgaon ..	129,479	112,878	268,301	228,038	730	733	3	1	398,513	341,650
4	Karnal ..	141,372	118,358	324,973	261,431	806	663	2,719	2,292	469,870	382,744
5	Ambala ..	126,913	103,924	285,157	219,659	4,284	2,857	57	51	416,411	326,491
6	Simla ..	4,346	1,464	18,372	11,050	788	752	11	3	23,517	13,269
7	Kangra ..	22,486	17,997	378,434	355,271	316	290	14,052	12,496	415,288	386,024
8	Hoshiarpur ..	174,351	153,727	314,534	273,982	2,083	1,681	60,899	50,930	551,867	480,320
9	Jullundur ..	223,611	195,945	225,350	180,842	2,714	1,609	60,992	52,658	512,667	431,054
10	Ludhiana ..	130,149	105,449	234,615	182,074	1,098	1,379	9,698	8,032	375,590	296,934
11	Ferozepore ..	280,323	235,107	331,865	266,080	4,381	2,689	19,687	16,600	636,256	520,476
12	Lahore ..	464,043	351,777	297,469	207,004	32,107	24,990	770	410	794,389	584,181
13	Amritsar ..	290,387	234,289	321,664	253,951	8,862	7,757	127	83	621,040	490,080
14	Gurdaspur ..	268,771	224,445	235,892	191,998	23,702	19,541	3,570	2,979	531,935	438,963
15	Sialkot ..	333,637	275,996	167,076	136,510	36,579	29,786	9	24	537,301	442,316
16	Gujranwala ..	287,794	233,549	93,869	71,559	26,940	22,424	3	..	408,606	327,532
17	Sheikhpura ..	244,064	201,932	106,948	82,775	26,895	22,371	6,483	5,264	384,390	312,342
18	Gujrat ..	425,716	361,034	70,238	61,328	1,746	1,351	636	378	498,336	424,091
19	Shahpur ..	367,879	311,667	70,849	58,209	6,223	5,071	885	707	445,836	375,654
20	Jhelum ..	251,656	230,441	39,670	27,637	388	284	..	..	282,714	258,382
21	Rawalpindi ..	279,287	245,678	58,514	43,313	4,924	2,562	46	33	342,771	291,586
22	Attock ..	279,546	252,247	26,912	24,544	490	220	1	..	306,949	277,011
23	Mianwali ..	187,872	169,237	27,930	26,115	211	169	3	2	216,016	195,523
24	Montgomery ..	381,956	315,586	151,734	117,123	9,618	7,627	9,148	6,980	552,456	447,316
25	Lyallpur ..	389,159	331,837	188,462	145,650	24,899	20,619	28,229	22,496	630,749	520,602
26	Jhang ..	297,801	255,052	57,550	53,850	267	227	53	33	355,671	309,162
27	Multan ..	515,218	427,719	122,107	94,888	5,780	4,144	2,920	2,124	646,025	528,875
28	Muzaffargarh ..	279,319	233,946	41,222	36,642	133	113	..	..	320,674	270,701
29	Dera Ghazi Khan ..	255,817	206,563	30,322	27,953	19	12	..	..	286,158	234,528
	Total ..	7,241,612	6,090,848	5,187,869	4,240,147	230,018	184,770	221,011	184,577	12,880	







## DEATHS REGISTERED BY SEXES AND CLASSES ACCORDING TO SPECIFIED AGE

1	2	4—concl.															
Number.	DISTRICTS.	UNDER ONE															
		OVER ONE MONTH AND NOT EXCEEDING SIX MONTHS.								OVER SIX MONTHS AND UNDER TWELVE MONTHS.							
		Muhammadans.		Hindus.		Indian Christians.		Other Classes.		Muhammadans.		Hindus.		Indian Christians.		Other Classes.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
1	Hissar ..	370	280	990	970	..	..	..	..	400	300	980	956	..	..	..	..
2	Rohtak ..	253	203	1,136	944	..	..	..	..	179	150	862	694	1	1	..	..
3	Gurgaon ..	475	426	894	807	..	..	..	..	443	442	842	679	..	..	..	..
4	Karnal ..	300	293	657	455	..	..	..	..	213	193	410	298	..	..	..	..
5	Ambala ..	318	125	635	775	1	1	..	..	219	166	823	702	..	..	..	..
6	Sirsa ..	17	9	28	17	3	1	2	1	9	11	13	9	1	..	1	1
7	Kangra ..	56	43	603	677	..	..	..	..	60	56	685	746	..	..	..	..
8	Hoshiarpur ..	438	335	709	629	4	1	..	..	513	402	909	901	2	..	..	..
9	Jullundur ..	327	308	524	517	..	..	..	..	425	362	652	644	..	..	..	..
10	Ludhiana ..	211	289	626	368	..	..	..	..	290	380	379	453	1	..	..	..
11	Ferozepore ..	609	516	722	511	5	4	16	19	515	521	742	571	2	1	17	15
12	Lahore ..	1,091	865	442	400	32	21	48	41	1,139	1,107	412	430	107	35	120	35
13	Amritsar ..	606	544	532	500	19	23	8	10	861	725	813	756	17	18	16	12
14	Gurdaspur ..	592	520	532	468	85	76	2	1	675	680	710	607	90	95	4	5
15	Sialkot ..	996	812	521	454	80	70	1	1	981	792	401	368	70	67	..	..
16	Gujranwala ..	1,089	977	379	296	135	99	..	..	1,105	979	368	301	125	105	..	1
17	Sheikhupura ..	732	647	241	195	101	60	24	23	696	717	297	242	110	69	33	30
18	Gujrat ..	1,046	899	102	95	4	..	..	..	812	757	85	74	4	1	..	..
19	Shahpur ..	1,260	1,112	107	103	14	8	4	3	956	943	88	95	9	5	3	2
20	Jhelum ..	635	524	45	35	..	..	..	..	451	404	23	20	..	..	..	..
21	Rawalpindi ..	509	445	94	91	4	3	1	2	642	519	87	82	..	..	1	1
22	Attock ..	490	373	1	2	..	..	..	..	580	522	18	14	..	..	..	..
23	Mianwali ..	588	503	87	77	..	..	..	..	431	426	62	63	..	1	..	..
24	Montgomery ..	1,050	844	103	98	43	40	27	30	792	784	176	139	25	10	27	16
25	Lyallpur ..	885	816	451	342	62	65	76	58	1,012	1,095	493	407	94	84	66	55
26	Jhang ..	790	702	83	69	..	..	..	..	536	535	104	84	..	1	..	..
27	Multan ..	1,312	925	211	392	1	4	2	16	1,298	891	185	389	5	6	10	8
28	Muzaffargarh ..	741	688	88	86	..	..	..	..	604	591	73	73	..	..	..	..
29	Dera Ghazi Khan ..	753	570	122	90	..	..	1	3	447	386	65	59	..	..	..	1
	Total ..	18,539	15,593	11,665	10,463	593	476	212	208	17,284	15,836	11,757	10,856	663	499	298	182
	Population according to Census of 1931.																
	Ratio per 1,000 living for the province.																

Not available



## No. V—CONTINUED.

PERIODS IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1933.

																5
YEAR—CONCLUDED.								ONE YEAR AND UNDER FIVE YEARS.								
TOTAL UNDER ONE YEAR																
Muhammadans.		Hindus.		Indian Christians.		Other Classes.		Muhammadans.		Hindus.		Indian Christians.		Other Classes.		
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Number.
45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	1
1,052	790	2,392	2,246	..	..	..	..	145	160	297	395	..	..	..	..	1
655	602	3,468	2,728	1	1	..	..	404	400	2,946	2,592	..	..	..	..	2
1,450	1,318	3,053	2,495	..	..	..	..	1,109	1,072	2,070	1,953	..	..	..	..	3
1,367	1,180	2,807	2,117	..	..	..	..	276	197	609	374	..	..	..	..	4
986	728	2,553	2,426	1	1	..	..	442	437	405	430	4	8	..	..	5
55	35	89	72	9	2	5	2	10	14	46	45	3	2	1	..	6
263	199	2,319	2,549	..	..	..	..	34	39	476	503	..	..	..	..	7
1,663	1,230	2,869	2,644	9	3	..	..	754	688	1,538	1,578	8	7	..	..	8
1,699	1,498	2,692	2,545	2	..	..	..	1,005	1,006	1,625	1,430	..	1	..	..	9
1,066	1,260	2,157	1,614	3	2	..	..	411	299	608	538	2	..	..	..	10
2,425	2,147	2,988	2,335	9	9	66	66	1,767	1,629	1,740	1,412	9	7	21	18	11
2,950	2,492	1,220	1,175	191	106	238	110	1,400	1,335	875	501	56	72	90	119	12
3,023	2,394	2,800	2,687	55	68	46	42	1,559	1,718	1,797	1,728	25	22	16	7	13
2,462	2,208	2,394	2,040	325	332	11	12	1,860	1,550	1,364	1,536	110	96	2	3	14
3,087	2,473	1,452	1,298	260	227	5	1	2,007	1,970	833	821	170	160	2	1	15
3,279	2,950	1,130	921	406	331	1	1	2,712	2,497	807	735	251	291	..	..	16
2,453	2,191	881	707	325	225	95	75	2,664	2,800	609	464	189	147	70	57	17
3,132	2,723	356	325	9	1	..	..	3,207	3,095	378	286	2	2	..	..	18
3,411	3,063	397	370	50	35	15	11	3,127	3,459	287	308	23	25	4	3	19
1,960	1,699	144	115	..	1	..	..	1,429	1,503	99	111	..	2	..	..	20
2,038	1,778	368	350	10	10	3	5	983	914	133	133	5	7	..	..	21
1,273	1,107	21	20	..	..	..	..	625	555	41	24	..	..	..	..	22
2,051	1,764	343	302	..	3	..	..	979	1,086	187	104	..	1	..	..	23
3,513	3,360	374	324	94	81	85	71	937	1,158	231	203	42	34	30	25	24
2,869	2,926	1,800	1,542	280	256	361	201	2,515	2,247	1,313	1,331	214	180	147	182	25
2,543	2,081	491	547	..	1	2	..	1,703	1,760	99	101	..	..	..	1	26
4,059	3,447	1,221	1,043	19	25	36	51	2,925	2,432	191	450	5	2	8	60	27
2,191	1,904	268	237	..	..	..	..	1,325	1,242	197	182	..	..	..	..	28
1,936	1,466	328	276	..	..	2	6	1,090	1,109	140	154	..	..	2	4	29
60,914	53,013	43,375	38,050	2,058	1,720	971	654	39,404	38,371	21,946	20,422	1,118	1,066	393	480	
252,222	249,024	174,610	168,573	8,661	8,554	8,151	7,727	861,657	821,585	550,705	524,700	27,527	26,611	25,645	24,597	
241·51	212·88	248·41	225·72	237·62	201·08	119·13	84·64	45·73	46·70	39·85	38·92	40·61	40·06	15·32	19·51	



## DEATHS REGISTERED BY SEXES AND CLASSES ACCORDING TO SPECIFIED AGE

1	2	6								7			
Number.	DISTRICTS.	FIVE YEARS AND UNDER TEN YEARS.								TEN YEARS AND UNDER			
		Muhammadans.		Hindus.		Indian Christians.		Other Classes.		Muhammadans.		Hindus.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
		61	62	63	64	65	66	67	68	69	70	71	72
1	Hissar ..	214	300	400	398	..	..	..	..	308	406	500	500
2	Rohtak ..	99	75	384	355	..	..	..	..	60	83	276	272
3	Gurgaon ..	125	95	218	174	..	..	..	..	128	113	273	239
4	Karnal ..	233	219	489	286	..	..	..	..	212	236	392	272
5	Ambala ..	179	248	289	202	1	2	..	..	107	168	160	154
6	Simla ..	..	2	6	13	..	1	..	..	4	7	5	2
7	Kangra ..	38	21	472	543	..	..	..	..	49	30	557	613
8	Hoshiarpur ..	278	281	573	568	2	..	..	..	175	192	323	365
9	Jullundur ..	187	177	220	250	..	..	..	..	119	107	157	169
10	Ludhiana ..	100	201	370	289	..	..	..	..	199	139	213	226
11	Ferozepore ..	422	372	299	236	2	4	22	21	223	218	204	213
12	Lahore ..	835	591	410	375	22	44	10	22	443	381	215	167
13	Amritsar ..	291	295	295	301	23	11	17	10	219	293	202	247
14	Gurdaspur ..	401	395	369	384	30	37	3	3	315	306	228	198
15	Sialkot ..	503	501	205	179	10	6	..	..	326	307	18	181
16	Gujranwala ..	748	666	327	236	96	78	1	..	712	603	274	229
17	Sheikhupura ..	445	443	199	171	49	48	15	9	200	155	119	131
18	Gujrat ..	706	706	85	64	..	1	..	..	476	550	49	45
19	Shahpur ..	713	765	69	76	6	7	1	2	305	302	47	39
20	Jhelum ..	407	442	38	36	..	..	..	..	194	239	24	23
21	Rawalpindi ..	467	462	102	98	4	4	4	..	366	365	75	74
22	Attock ..	832	754	29	37	..	..	..	..	766	669	38	38
23	Mianwali ..	378	412	40	52	..	..	..	..	152	187	20	11
24	Montgomery ..	939	806	135	201	34	41	37	14	996	670	104	248
25	Lyallpur ..	495	476	290	257	41	39	40	43	230	249	178	187
26	Jhang ..	438	415	87	105	..	..	..	1	180	191	58	92
27	Multan ..	1,081	892	83	170	8	5	9	7	525	412	74	215
28	Muzaffargarh ..	437	398	66	54	..	..	..	..	277	229	34	28
29	Dera Ghazi Kahn ..	427	331	46	48	..	..	1	2	175	96	24	17
	Total ..	12,418	11,741	6,595	6,158	328	328	160	134	8,441	7,903	5,005	5,195
	Population according to Census of 1931.	978,898	843,756	650,409	556,237	31,061	26,412	30,960	26,099	887,055	723,772	627,163	509,235
	Ratio per 1,000 living for the Province.	12.69	13.92	10.14	11.07	10.56	12.42	5.17	5.13	9.52	10.92	7.98	10.20



## No. V—CONTINUED.

IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1933.

8

FIFTEEN YEARS.

FIFTEEN YEARS AND UNDER TWENTY YEARS.

Indian Christians.		Other Classes.		Muhammadans.		Hindus.		Indian Christians.		Other Classes.		Number.
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
73	74	75	76	77	78	79	80	81	82	83	84	1
..	..	..	..	454	485	600	705	..	..	..	..	1
..	1	..	..	59	80	273	291	..	..	..	..	2
..	..	..	..	133	103	327	336	..	..	..	..	3
..	..	..	..	251	121	307	254	..	..	..	..	4
..	2	..	..	120	184	151	200	..	..	..	..	5
..	1	..	..	5	6	19	11	..	..	..	1	6
..	..	..	..	59	29	626	594	..	..	..	..	7
4	1	..	..	131	164	338	363	3	1	..	..	8
..	..	..	..	98	122	141	158	..	..	..	..	9
2	1	..	..	100	194	318	255	..	..	..	..	10
5	3	19	18	232	258	217	278	2	1	18	17	11
99	116	86	28	438	421	265	205	28	23	21	27	12
17	9	9	7	205	258	199	248	13	13	11	12	13
25	29	2	..	318	226	178	284	16	21	4	..	14
8	8	..	..	329	298	188	172	9	10	..	..	15
90	71	..	..	662	619	268	227	88	69	1	..	16
39	20	12	5	93	104	105	97	36	19	9	3	17
1	..	..	..	387	439	33	43	1	..	..	..	18
5	2	1	..	225	232	37	43	4	3	1	2	19
1	1	..	..	125	167	18	27	..	..	..	..	20
2	1	..	..	324	314	49	45	1	..	1	1	21
..	..	..	..	801	765	46	35	..	..	..	..	22
..	..	..	..	191	151	41	52	..	..	..	..	23
21	13	28	13	887	794	184	105	14	9	24	18	24
28	25	25	35	169	180	97	126	11	17	25	35	25
..	..	..	..	105	101	35	71	..	..	..	..	26
10	8	17	13	389	545	135	229	15	6	36	9	27
..	..	..	..	236	301	31	34	..	..	..	..	28
..	..	1	..	111	89	18	27	..	..	..	..	29
357	312	200	119	7,637	7,750	5,244	5,515	241	192	151	125	
28,333	23,034	28,999	23,503	659,280	551,198	501,205	400,708	22,604	17,645	20,343	17,274	
12.60	13.55	6.90	5.06	11.58	14.06	10.46	13.76	10.66	10.88	7.42	7.24	



## DEATHS REGISTERED BY SEXES AND CLASSES ACCORDING TO SPECIFIED AG

1	2	9								10			
Number.	DISTRICTS.	TWENTY YEARS AND UNDER THIRTY YEARS.								THIRTY YEARS AND OVER.			
		Muhammadans.		Hindus.		Indian Christians.		Other Classes.		Muhammadans.		Hindus.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	85	86	87	88	89	90	91	92	93	94	95	96
1	Hissar ..	616	650	700	896	..	..	..	..	747	850	901	1,0
2	Rohtak ..	113	155	474	606	1	..	..	..	93	119	441	52
3	Gurgaon ..	308	301	645	681	..	..	..	..	293	287	546	51
4	Karnal ..	161	138	289	214	..	..	..	..	187	141	228	11
5	Ambala ..	155	234	361	420	..	2	..	..	124	380	885	50
6	Simla ..	11	4	47	49	1	..	..	1	4	1	46	1
7	Kangra ..	60	38	737	686	..	..	..	..	80	41	825	7
8	Hoshiarpur ..	210	255	421	497	1	1	..	..	198	187	403	4
9	Jullundur ..	205	295	287	384	..	..	..	..	173	161	267	3
10	Ludhiana ..	159	199	298	236	1	1	..	..	201	200	320	2
11	Ferozepore ..	387	428	384	412	4	3	30	29	387	352	416	3
12	Lahore ..	402	329	180	149	70	39	88	24	569	226	200	3
13	Amritsar ..	321	427	311	468	19	8	9	8	259	228	283	3
14	Gurdaspur ..	325	260	415	569	12	11	..	..	318	295	417	3
15	Sialkot ..	899	889	400	380	170	165	2	1	782	675	348	3
16	Gujranwala ..	661	599	267	218	91	64	..	1	669	602	270	2
17	Sheikhupura ..	344	449	87	105	46	25	11	5	265	339	89	1
18	Gujrat ..	561	640	60	77	2	..	..	..	574	645	80	1
19	Shahpur ..	478	612	88	97	11	16	3	4	385	515	73	1
20	Jhelum ..	324	489	22	52	..	..	..	..	327	451	24	1
21	Rawalpindi ..	328	351	42	36	2	1	..	..	447	443	60	1
22	Attock ..	793	660	29	36	..	..	..	..	689	733	38	1
23	Mianwali ..	245	280	111	198	..	..	..	..	297	331	72	1
24	Montgomery ..	682	682	265	135	10	8	23	10	670	494	152	1
25	Lyallpur ..	286	349	167	228	21	28	29	38	229	239	154	1
26	Jhang ..	239	391	121	105	..	..	..	..	346	376	44	1
27	Multan ..	700	712	127	229	5	3	17	16	646	925	104	1
28	Muzaffargarh ..	420	707	53	87	..	..	..	..	544	631	68	1
29	Dera Ghazi Khan ..	302	407	3	75	..	..	..	1	336	360	40	1
	Total ..	10,695	11,930	7,441	8,325	467	375	212	138	10,839	11,227	7,794	7.
	Population according to Census of 1931.	1,248,498	1,065,419	903,566	733,084	44,350	32,184	36,920	30,492	934,945	737,956	687,715	524.
	Ratio per 1,000 living for the Province.	8.57	11.20	8.24	11.36	10.53	11.65	5.74	4.53	11.59	15.21	11.33	14



No. V—CONTINUED.

PERIODS IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1933.

				11								12				1
UNDER FORTY YEARS.				FORTY YEARS AND UNDER FIFTY YEARS.								FIFTY YEARS AND UNDER SIXTY YEARS.				
Indian Christians.		Other classes.		Muhammadans.		Hindus.		Indians Christians.		Other classes.		Muhammadans.		Hindus.		
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Number.
97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	1
..	..	..	..	780	900	991	1,094	..	..	..	..	450	700	874	806	1
..	..	..	..	111	113	502	496	..	..	..	..	147	127	562	507	2
..	..	..	..	273	248	592	583	1	..	..	..	160	174	295	247	3
..	..	..	..	393	418	767	826	..	..	..	..	715	684	1,434	1,432	4
1	4	..	..	299	296	971	819	1	4	..	..	258	357	831	706	5
..	1	..	1	5	2	32	12	2	1	..	..	..	..	37	18	6
..	..	..	..	89	33	896	816	..	..	..	..	104	53	918	878	7
1	2	..	..	217	299	468	393	3	2	..	..	318	305	737	695	8
..	..	..	..	213	149	284	252	..	..	..	..	189	161	392	291	9
..	..	..	..	198	191	328	304	2	2	..	..	211	201	459	414	10
2	3	21	23	441	372	511	384	3	2	35	34	527	437	553	431	11
65	49	35	61	522	579	359	292	52	30	85	79	891	658	599	573	12
27	12	13	5	311	240	253	211	15	9	12	10	307	228	413	299	13
24	27	..	..	375	275	331	276	26	22	..	1	386	200	326	403	14
86	78	..	..	647	562	253	257	76	61	..	..	491	441	268	267	15
86	58	..	..	691	604	267	221	90	66	..	1	661	603	271	214	16
40	35	11	4	303	189	81	102	39	31	13	3	237	165	94	92	17
1	2	..	..	598	599	54	59	3	1	..	..	755	702	102	68	18
10	13	3	3	427	373	81	66	8	6	2	1	494	408	83	65	19
..	1	..	..	381	326	38	22	1	1	..	..	430	348	34	26	20
1	..	1	..	539	527	79	81	1	4	..	..	632	638	93	102	21
..	..	..	..	635	620	37	32	..	..	..	..	548	542	46	37	22
..	..	..	..	321	302	57	43	..	..	..	..	379	314	47	50	23
12	15	36	24	477	431	190	85	8	18	17	11	346	281	101	57	24
23	20	26	34	239	110	141	180	16	22	33	40	255	217	149	121	25
1	..	1	2	296	246	52	78	..	..	..	..	399	302	41	61	26
15	4	15	9	791	513	55	181	10	2	16	19	995	529	48	215	27
..	..	..	..	555	426	77	55	..	..	..	..	527	329	64	39	28
..	..	1	4	359	281	55	44	..	..	..	2	354	194	59	35	29
395	324	163	170	11,486	10,224	8,802	8,174	357	284	213	201	12,166	10,298	9,930	9,149	
28,030	20,961	26,762	21,242	632,068	503,407	488,096	376,456	17,893	13,837	18,709	14,865	411,986	316,705	325,983	241,273	
14·09	15·46	6·09	8·00	18·17	20·31	18·03	21·71	19·95	20·52	11·38	13·52	29·53	32·52	30·46	37·92	



## DEATHS REGISTERED BY SEXES AND CLASSES ACCORDING TO SPECIFIED AGE

1	2	12—concl'd.				13					
Number.	DISTRICTS.	FIFTY YEARS AND UNDER SIXTY YEARS— <i>concl'd.</i>				SIXTY YEARS AND UPWARDS.					
		Indian Christians.		Other Classes.		Muhammadans.		Hindus.		Indian Christians.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
	1	113	114	115	116	117	118	119	120	121	122
1	Hissar	..	..	..	..	331	304	406	430	..	..
2	Mohtak	..	..	..	..	302	267	1,207	1,037	..	..
3	Gurgaon	..	..	..	..	485	482	1,086	955	1	..
4	Karnal	..	..	..	..	622	756	2,755	2,665	1	1
5	Ambala	..	2	..	..	346	301	920	838	2	..
6	Simla	..	1	..	..	..	..	71	55	..	..
7	Kangra	..	..	..	..	91	57	1,080	941	..	..
8	Hoshiarpur	..	..	..	..	782	765	2,043	1,794	6	2
9	Jullundur	..	..	..	..	1,368	1,195	1,098	720	..	..
10	Ludhiana	..	..	..	..	611	200	701	1,006	9	1
11	Ferozepore	2	4	37	39	933	747	872	726	3	1
12	Lahore	30	69	47	95	1,400	1,346	1,132	878	77	93
13	Amritsar	8	8	15	11	998	884	1,320	1,129	25	14
14	Gurdaspur	27	29	..	..	1,186	841	715	746	65	71
15	Sialkot	68	57	..	..	1,013	922	463	445	204	201
16	Gujranwala	88	60	1	..	619	568	257	202	68	54
17	Sheikhupura	37	29	11	2	1,087	824	371	318	105	81
18	Gujrat	2	6	..	..	2,180	1,825	199	165	4	3
19	Shahpur	14	13	4	2	1,539	1,255	188	154	19	16
20	Jhelum	..	..	..	..	1,436	1,188	156	138	..	1
21	Rawalpindi	2	..	..	..	928	891	123	131	2	2
22	Attock	..	..	..	..	726	791	30	33	..	..
23	Mianwali	..	..	..	..	624	487	67	57	..	..
24	Montgomery	4	13	15	8	427	364	95	91	6	7
25	Lyallpur	23	19	37	51	1,073	833	540	363	136	138
26	Jhang	..	1	..	..	1,158	886	86	86	..	..
27	Multan	4	4	6	27	1,288	852	382	500	9	10
28	Muzaffargarh	..	..	..	..	985	638	123	71	..	..
29	Dera Ghazi Khan	..	..	1	1	667	435	108	100	..	..
	Total	310	315	174	236	25,205	20,904	18,594	16,774	742	696
	Population according to Census of 1931.	11,137	8,296	12,102	9,544	375,003	278,026	278,417	205,484	10,422	7,236
	Ratio per 1,000 living for the Province.	27·84	37·97	14·38	24·73	67·21	75·19	66·78	81·63	71·20	96·19



DURING THE YEAR 1933.

14

[illegible]



## ANNUAL FORM No. V—CONCLUDED.

DEATHS REGISTERED BY SEXES AND CLASSES ACCORDING TO SPECIFIED AGE PERIODS IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1933.

1	2	15										
RATIO OF DEATHS PER 10,000 OF POPULATION.												
Number.	DISTRICTS.	Muhammadans.		Hindus.		Indian Christians.		Other Classes.		Total.		Number.
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
		133	134	135	136	137	138	139	140	141	142	
1	2	133	134	135	136	137	138	139	140	141	142	1
1	Hissar ..	37·52	47·01	23·08	28·71	..	..	..	..	27·09	33·89	1
2	Rohtak ..	28·05	31·06	29·46	30·85	0·82	0·85	..	..	29·06	30·70	2
3	Gurgaon ..	34·48	37·15	33·94	36·20	2·74	..	..	..	34·05	36·44	3
4	Karnal ..	31·24	34·56	31·01	33·03	2·48	1·51	..	..	30·85	33·25	4
5	Ambala ..	23·76	32·07	26·39	30·50	2·33	8·75	..	..	25·34	30·81	5
6	Simla ..	21·63	48·50	21·66	28·24	19·04	11·97	545·45	?	21·81	29·92	6
7	Kangra ..	38·56	30·01	23·53	24·93	..	..	..	..	23·53	24·34	7
8	Hoshiarpur ..	27·11	28·40	30·88	34·21	17·76	11·30	..	..	26·23	28·64	8
9	Jullundur ..	23·51	24·86	31·79	35·95	0·74	0·62	..	..	24·23	26·38	9
10	Ludhiana ..	25·02	29·25	24·60	28·06	17·30	5·08	0·21	..	24·09	27·62	10
11	Ferozepore ..	27·63	29·60	24·66	25·41	9·36	13·76	16·00	18·61	25·59	27·03	11
12	Lahore ..	21·23	23·76	18·34	22·22	21·49	25·65	?	?	21·23	24·50	12
13	Amritsar ..	25·80	29·73	24·48	30·18	25·61	22·43	?	?	25·38	30·09	13
14	Gurdaspur ..	29·56	29·21	28·56	35·29	27·85	34·54	6·72	8·39	28·89	31·97	14
15	Sialkot ..	30·22	32·75	27·51	31·81	29·01	32·67	?	166·67	29·32	32·46	15
16	Gujranwala ..	39·66	44·15	44·08	47·71	50·26	50·93	?	?	41·39	45·40	16
17	Sheikhupura ..	33·16	37·93	24·64	27·88	33·65	29·50	43·34	34·57	31·00	34·61	17
18	Gujrat ..	29·54	33·03	19·88	19·42	14·32	11·84	..	..	28·09	30·96	18
19	Shahpur ..	30·18	35·24	19·05	22·40	24·10	26·82	45·20	46·68	28·36	33·16	19
20	Jhelum ..	27·87	29·73	19·47	21·28	5·15	24·65	..	..	26·92	28·82	20
21	Rawalpindi ..	25·25	27·20	19·21	25·60	6·09	11·32	195·65	181·82	23·97	26·84	21
22	Attock ..	27·50	28·53	13·19	13·28	..	..	..	..	26·20	27·15	22
23	Mianwali ..	29·90	31·40	35·27	36·49	..	23·67	..	..	30·56	32·07	23
24	Montgomery ..	25·85	28·65	12·07	14·12	25·47	31·34	35·09	28·51	22·21	24·89	24
25	Lyallpur ..	21·48	23·58	25·62	31·04	31·85	36·08	28·80	33·74	23·46	26·00	25
26	Jhang ..	24·87	26·46	19·36	24·68	3·75	8·81	56·60	181·82	23·97	26·15	26
27	Multan ..	26·01	26·32	19·82	35·59	17·30	16·65	74·66	108·76	24·98	28·24	27
28	Muzaffargarh ..	26·84	29·09	23·80	23·61	..	..	..	..	26·44	28·33	28
29	Dera Ghazi Khan ..	22·50	23·08	28·73	29·62	..	..	?	?	23·19	23·95	29
	Total ..	27·51	30·10	25·97	29·61	27·71	30·37	14·00	14·18	26·66	29·64	
	Population according to Census of 1931.	..	..	..	..	..	..	..	..	..	..	
	Ratios per 1,000 living for the Province.	..	..	..	..	..	..	..	..	..	..	

NOTE.—The population of Military Cantonments by different ages cannot be excluded as it is not shown separately in the census returns. Including population of Europeans and Anglo-Indian, etc. (120,585).

? Figures incorrect due to misclassification.



## ANNUAL FORM No. VI.

DEATHS FROM DIFFERENT CAUSES AND BIRTHS REGISTERED IN THE DISTRICTS (RURAL CIRCLES) AND IN THE TOWNS OF THE PUNJAB DURING THE YEAR 1933.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
Number.	A.—RURAL CIRCLES.	Population according to Census of 1931.	BIRTHS.		Deaths from all causes.		INJURIES.					RATIO OF DEATHS PER 1,000 OF POPULATION.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
			Males.	Females.	Total.	Birth rate per 1,000 of population.	Respiratory diseases.		Dysentery and Diarrhoea.		Fever.		Plague.	Small-pox.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	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Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	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Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	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Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	



## ANNUAL FORM No. VI—CONTINUED.

DEATHS FROM DIFFERENT CAUSES AND BIRTHS REGISTERED IN THE DISTRICTS (RURAL CIRCLES) AND IN THE TOWNS OF THE PUNJAB DURING THE YEAR 1933.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	RATIO OF DEATHS PER 1,000 OF POPULATION.															
Number.	B.—Towns.	Population according to Census of 1931.	Births.		Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhea.	Respiratory diseases.	Injuries.						Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhea.	Respiratory diseases.	Injuries.	All other causes.	For the year.	Mean ratio of previous five years.		
			Males.	Females.							Suicide.	Wounds and accidents.	Snake-bite and killed by wild beasts.	Rabies.	Total.														
1	Hissar	25,179	554	455	1,009	40-07	1	219	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2	Hansi	18,356	479	452	931	50-72	..	168	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3	Bhiwani	35,896	861	862	1,723	48-04	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4	Sirsa	18,909	309	256	565	29-88	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5	Budhlada	8,369	33	20	53	6-33	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	Rohtak	34,112	740	605	1,345	39-43	..	26	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7	Jhajjar	12,232	315	253	568	46-44	..	15	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8	Beri	7,877	232	238	470	59-67	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9	Gohana	5,045	118	85	203	40-24	3	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10	Bahadurgarh	6,963	185	169	354	50-84	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11	Sonepat	15,050	370	354	724	48-11	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
12	Mehna	9,079	190	154	344	37-89	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13	Rohtak Civil Line.	1,123	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14	Rowari	26,269	688	646	1,334	50-78	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15	Palwal	10,807	299	317	616	57-00	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16	Firozpur	5,390	155	131	286	53-06	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
17	Hodal	7,258	167	166	333	45-88	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18	Ballaugharh	4,162	121	94	215	51-63	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
19	Faridabad	5,134	112	110	222	43-24	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
20	Hidayatpur Chharoni.	7,208	111	84	195	27-05	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
21	Karnal	25,371	679	563	1,242	48-95	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
22	Kaithal	19,418	467	408	875	45-06	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
23	Paunipat	32,915	913	793	1,706	51-83	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
24	Shahabad	12,293	269	211	480	39-05	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25	Thanesar	5,032	86	69	155	30-82	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
26	Pundri	6,053	79	59	138	23-80	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
27	Karnal Civil Line	1,239	21	22	43	34-71	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..







## ANNUAL FORM No. VI—CONTINUED.

DEATHS FROM DIFFERENT CAUSES AND BIRTHS REGISTERED IN THE DISTRICTS (RURAL CIRCLES) AND IN THE TOWNS OF THE PUNJAB DURING THE YEAR 1933.

1	2	3	4				5	6	7	8	9	10	11				12	13	14												
Number.	B.—Towns.	Population according to Censuses of 1931.	BURNUS.			Birth rate per 1,000 of population.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	INJURIES.					All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	For the year.	Mean ratio of previous five years.		
			Males.	Females.	Total.								Suicide.	Wounds and accidents.	Snake-bite and killed by wild beasts.	Rabies.	Total.														
																														14	15
65	Ferozepore	32,653	750	704	1,454	44.55	..	5	..	132	40	246	..	8	..	..	..	8	232	663	..	0.15	..	..	4.04	1.23	7.53	0.25	7.11	20.30	22.39
66	Zira	5,318	138	117	255	47.95	..	..	..	63	2	27	..	..	..	..	..	..	40	132	..	..	..	..	11.85	0.38	5.08	..	7.52	24.82	28.58
67	Dharmkot	6,779	177	133	310	45.73	..	..	..	140	6	12	..	3	..	..	..	..	20	182	..	0.15	..	..	20.65	0.89	1.77	0.44	2.95	26.85	27.59
68	Mukhtar	14,839	356	325	681	45.89	..	11	..	124	16	58	..	4	..	..	..	..	52	266	..	0.74	..	..	8.36	1.08	3.91	0.34	3.50	17.92	21.09
69	Fazilka	18,403	406	398	804	43.55	..	3	..	112	31	111	..	1	..	..	..	..	227	488	..	0.16	..	..	6.07	1.68	6.01	0.22	12.29	26.43	25.66
70	Moga	17,581	393	361	754	41.18	..	..	..	184	6	46	..	5	..	..	..	..	96	334	..	..	..	..	10.47	0.11	2.62	0.34	5.46	19.00	18.54
71	Abdhar	14,035	266	240	506	36.05	..	..	..	50	6	21	..	5	..	..	..	..	58	141	..	..	..	..	3.56	0.43	1.50	0.43	4.13	10.05	23.23
72	Jalalabad	7,793	113	127	240	31.29	..	1	..	56	6	20	..	1	..	..	..	..	27	112	..	0.13	..	..	7.27	0.78	2.69	0.26	3.51	14.54	19.34
73	Ferozepore Cantonment.	20,179	420	364	784	38.85	..	..	..	320	5	89	..	5	..	..	..	..	8	427	..	..	..	..	15.86	0.25	4.41	0.25	0.40	21.16	..
74	LAHORE DISTRICT.	393,985	7,053	6,004	13,057	33.14	12	254	1	3,032	558	2,052	1	186	..	1	..	1	2,479	8,583	0.03	0.64	0.002	..	7.70	1.42	5.21	0.49	6.29	21.79	21.60
75	Lahore	8,269	169	150	319	38.58	..	1	..	116	1	36	..	..	..	..	..	..	59	217	..	0.12	..	..	14.03	0.12	4.35	0.48	7.14	26.24	32.41
76	Kasur	46,815	1,006	884	1,890	40.37	1	21	..	396	44	179	..	5	..	..	..	..	290	936	0.02	0.45	..	..	8.46	0.94	3.82	0.11	6.19	19.99	19.56
77	Khew Kara	6,898	211	208	419	60.74	..	17	..	120	8	22	..	5	..	..	..	..	60	232	..	2.46	..	..	17.40	1.16	3.19	0.72	8.70	33.63	30.44
78	Patti	12,882	307	290	597	45.00	..	45	..	121	22	38	..	5	..	..	..	..	123	354	..	3.49	..	..	9.39	1.71	2.95	0.39	9.55	27.48	24.06
79	Baghbanpura Bhogival.	13,805	218	188	406	29.41	..	13	..	108	3	32	..	1	..	..	..	..	67	225	..	0.94	..	..	7.82	0.22	2.32	0.14	4.85	16.30	22.67
80	Lahore	5,048	126	99	225	44.57	..	2	..	51	1	21	..	1	..	..	..	..	20	96	..	0.40	..	..	10.10	0.20	4.16	0.20	3.96	19.02	15.65
81	Pattoki Mandi	8,016	154	114	268	33.43	..	..	..	85	1	8	..	4	..	..	..	..	47	145	..	..	..	..	10.60	0.12	1.00	0.50	5.86	18.09	12.48
82	Sar Singh	6,129	171	153	324	52.86	..	2	..	75	9	28	..	4	..	..	..	..	42	160	..	0.33	..	..	12.24	1.47	4.57	0.65	6.85	26.11	21.21
83	Lahore Cantonment.	19,615	116	107	223	11.37	..	..	..	61	2	6	..	1	..	..	..	..	9	79	..	..	..	..	3.11	0.10	0.31	0.05	0.46	4.03	..
84	AMRITSAR DISTRICT.	262,995	5,128	4,725	9,853	37.46	16	72	30	2,691	210	2,060	..	103	1	..	..	114	1,660	6,853	0.06	0.27	0.11	..	10.23	0.80	7.83	0.43	6.31	26.06	24.10
85	Amritsar	6,709	162	161	323	48.14	1	..	..	104	7	27	..	..	..	..	..	1	22	162	0.15	..	..	..	15.50	1.04	4.02	0.15	3.28	24.15	25.79
86	Jandiala	8,888	233	187	420	47.25	..	19	..	95	12	32	..	2	..	..	..	3	24	185	..	2.14	..	..	10.69	1.35	3.60	0.34	2.70	20.81	23.18
87	Tarn Taran	10,103	229	186	415	41.08	..	2	..	73	2	25	..	..	..	..	..	1	24	127	..	0.20	..	..	7.23	0.20	2.47	0.10	2.38	12.67	12.97
88	Sultanwind	5,672	151	148	299	53.66	..	..	..	83	4	31	..	4	1	..	..	5	34	157	..	..	..	..	14.90	0.72	5.56	0.90	6.10	28.18	31.05
89	Amritsar Cantonment.	969	12	17	29	30.24	..	..	..	7	..	1	..	..	..	..	..	..	4	12	..	..	..	..	7.30	..	1.04	..	4.17	12.51	..



GURDASPUR DISTRICT.														
90	Gurdaspur	11,116	256	215	471	42-37	1	1	1	1	1	1	1	1
91	Dina Nagar	5,114	90	66	156	30-50	1	1	1	1	1	1	1	1
92	Pathankot	9,763	241	224	465	47-63	1	1	1	1	1	1	1	1
93	Dalhousie	1,030	4	10	14	13-59	9	1	1	1	1	1	1	1
94	Batala	32,304	878	896	1,714	51-62	2	1	1	1	1	1	1	1
95	Dera Nank	5,176	130	115	245	47-33	2	1	1	1	1	1	1	1
96	Fatehgarh	6,457	130	103	233	36-08	1	1	1	1	1	1	1	1
97	Qadian	7,018	35	20	55	7-84	7	1	1	1	1	1	1	1
98	Gurdaspur Civil	978	..	..	..	..	..	..	..	..	..	..	..	..
99	Line.	695	1	3	4	5-76	..	..	..	..	..	..	..	..
100	Dalhousie Cantonment.	1,602	78	72	150	149-70	..	..	..	..	..	..	..	..
101	Bakloh Cantonment.	..	..	..	..	..	..	..	..	..	..	..	..	..
SIALKOT DISTRICT.														
101	Sialkot	82,923	2,077	1,904	3,981	48-01	44	1	1	1	1	1	1	1
102	Daska	8,636	109	89	198	22-93	5	1	1	1	1	1	1	1
103	Parur	7,965	209	195	404	51-11	4	1	1	1	1	1	1	1
104	Narawal	7,005	207	207	408	57-51	5	1	1	1	1	1	1	1
105	Chawinda	6,111	171	168	339	52-88	1	1	1	1	1	1	1	1
106	Sialkot Cantonment.	8,805	178	155	333	37-82	..	..	..	..	..	..	..	..
GUJRANWALA DISTRICT.														
107	Gujranwala	58,716	1,389	1,226	2,615	44-54	1	1	1	1	1	1	1	1
108	Wazirabad	20,707	440	407	847	40-90	14	1	1	1	1	1	1	1
109	Eminabad	7,329	169	141	310	42-30	6	1	1	1	1	1	1	1
110	Alakgarh	5,483	145	153	298	54-35	2	1	1	1	1	1	1	1
111	Hadizabad	14,431	238	212	460	31-18	2	1	1	1	1	1	1	1
SHEIKHUPURA DISTRICT.														
112	Sangla	6,478	113	80	193	29-79	7	1	1	1	1	1	1	1
113	Sharakpur	5,056	128	130	258	51-03	2	1	1	1	1	1	1	1
114	Nankana Sahib	9,155	169	147	316	34-52	2	1	1	1	1	1	1	1
115	Shahdara	5,249	129	110	239	45-53	1	1	1	1	1	1	1	1
116	Shekhpura	12,166	226	170	396	32-55	..	..	..	..	..	..	..	..
GUJRAT DISTRICT.														
117	Gujrat	25,604	667	713	1,389	53-90	13	1	1	1	1	1	1	1
118	Jalapur	12,507	296	240	536	42-86	4	1	1	1	1	1	1	1
119	Kunjah	7,152	202	164	396	51-17	2	1	1	1	1	1	1	1
120	Dinga	7,068	147	145	292	41-31	1	1	1	1	1	1	1	1
121	Gujrat Civil	907	18	13	31	34-18	..	..	..	..	..	..	..	..
SHAHUPUR DISTRICT.														
122	Shahpur	5,280	121	91	212	40-15	..	..	..	..	..	..	..	..
123	Sahawal	7,762	145	168	313	40-32	2	1	1	1	1	1	1	1
124	Bheta	19,741	475	438	913	46-25	15	1	1	1	1	1	1	1
125	Misal	6,472	135	140	275	42-49	22	1	1	1	1	1	1	1
126	Khushab	14,194	286	237	523	36-85	27	1	1	1	1	1	1	1
127	Sargodha	29,761	449	395	844	31-54	14	1	1	1	1	1	1	1
128	Station.	3,265	47	41	88	26-95	3	1	1	1	1	1	1	1

\*Not available.







LYALLPUR DISTRICT.		795	655	1,450	33-78	..	68	..	426	28	135	2	..	2	..	..	4	242	903	..	1-58	..	9-92	0-65	3-15	0-09	5-64	21-04	16-56
148	Lyallpur ..	42,922	795	1,450	33-78	..	68	..	426	28	135	2	..	2	..	..	4	242	903	..	1-58	..	9-92	0-65	3-15	0-09	5-64	21-04	16-56
149	Gofra ..	9,779	183	339	34-67	..	4	..	61	4	15	1	..	..	..	..	1	39	124	..	0-41	..	6-24	0-41	1-53	0-10	3-99	12-68	12-48
150	Tandianwala ..	6,105	141	95	38-66	..	1	..	84	3	12	..	..	..	..	..	..	9	109	..	0-16	..	13-76	0-49	1-97	..	1-47	17-85	11-47
151	Toba Tek Singh ..	5,903	65	118	19-99	..	..	..	26	1	7	..	..	..	..	..	..	7	41	..	..	4-40	0-17	1-19	..	1-19	6-94	8-47	
152	Jaranwala ..	7,320	139	251	34-29	..	2	..	49	3	20	..	..	..	..	..	..	16	90	..	0-27	..	6-69	0-41	2-73	..	2-19	12-29	11-48
153	Kamalia ..	13,220	317	612	46-29	..	4	..	155	8	26	..	..	..	..	..	4	108	305	..	0-30	..	11-72	0-61	1-97	0-30	8-17	23-07	21-79
JHANG DISTRICT.		881	769	1,650	45-79	..	54	..	429	47	129	..	..	9	1	..	10	274	943	..	1-50	..	11-91	1-30	3-58	0-28	7-60	26-17	32-06
154	Jhang-Maghiana ..	36,035	881	1,650	45-79	..	54	..	429	47	129	..	..	9	1	..	10	274	943	..	1-50	..	11-91	1-30	3-58	0-28	7-60	26-17	32-06
155	Chitot ..	25,841	611	1,205	46-03	..	32	..	212	19	76	..	..	8	1	..	9	214	562	..	1-24	..	8-30	0-74	2-94	0-35	8-28	21-75	22-29
156	Ahmadpur ..	5,045	126	230	45-59	..	..	..	182	4	6	..	..	2	..	..	2	24	218	..	..	..	36-08	0-79	1-19	0-40	4-76	43-21	14-47
157	Shorkot ..	6,826	189	361	52-89	..	..	..	152	5	14	..	..	2	3	..	5	14	190	..	..	..	22-27	0-73	2-05	0-73	2-05	27-83	*
MULTAN DISTRICT.		2,386	2,316	4,702	43-79	..	23	..	715	628	1,016	..	3	18	..	2	23	630	3,035	..	0-21	..	6-66	5-85	9-46	0-21	5-87	28-27	28-03
158	Multan ..	107,366	2,386	4,702	43-79	..	23	..	715	628	1,016	..	3	18	..	2	23	630	3,035	..	0-21	..	6-66	5-85	9-46	0-21	5-87	28-27	28-03
159	Shujabad ..	129	120	249	37-62	..	4	..	156	19	43	..	..	1	..	..	1	62	285	..	0-60	..	23-57	2-87	6-50	0-15	9-37	43-06	33-85
160	Khanewal ..	11,295	82	137	12-23	..	..	..	21	3	13	..	..	..	..	..	..	4	41	..	..	1-87	0-27	1-16	..	0-36	3-66	5-89	
161	Kahror ..	8,042	113	216	26-86	..	..	..	80	15	26	..	..	..	..	..	..	19	140	..	..	..	..	1-85	1-87	3-23	2-36	17-41	*
162	Tulamba ..	5,665	117	214	37-78	..	2	..	103	2	5	..	..	..	..	..	1	2	115	..	0-26	..	18-18	0-35	0-88	0-18	0-35	20-30	*
163	Multan Cantonment.	7,790	83	156	20-03	..	..	..	26	1	3	..	..	..	..	..	..	18	48	..	..	..	3-34	0-13	0-39	..	2-31	6-16	*
MUZAFFARGARH DISTRICT.		5,853	149	276	47-16	..	..	..	77	7	15	..	..	1	..	3	4	24	127	..	..	..	13-16	1-20	2-56	0-68	4-10	21-70	22-38
164	Muzaffargarh ..	5,853	149	276	47-16	..	..	..	77	7	15	..	..	1	..	3	4	24	127	..	..	..	13-16	1-20	2-56	0-68	4-10	21-70	22-38
165	Khangarh ..	2,863	72	127	44-36	..	..	..	63	9	11	..	..	1	..	..	1	17	101	..	..	..	22-00	3-14	3-84	0-35	5-94	35-28	41-56
166	Alpur ..	3,931	103	180	45-79	..	..	..	82	4	16	..	..	..	..	..	..	17	119	..	..	..	30-86	1-02	4-07	..	4-32	30-27	29-00
167	Leiah ..	9,578	231	443	46-25	..	1	..	217	3	8	..	..	..	..	..	..	27	256	..	0-10	..	22-66	0-31	0-84	..	2-82	26-73	28-40
168	Karor ..	3,491	89	180	51-56	..	..	..	114	..	5	..	..	..	..	..	..	27	146	..	..	..	32-66	..	1-43	..	7-73	41-82	40-39
169	Muzaffargarh Civil Line.	257	2	4	15-56	..	..	..	3	..	2	..	..	..	..	..	..	2	7	..	..	..	11-67	..	7-78	..	7-78	27-24	*
DERA GHAZI KHAN DISTRICT.		23,468	505	1,002	42-70	..	10	..	280	48	36	..	..	..	1	..	1	104	479	..	0-43	..	11-93	2-05	1-53	0-04	4-43	20-41	21-77
170	Dera Ghazi Khan.	23,468	505	1,002	42-70	..	10	..	280	48	36	..	..	..	1	..	1	104	479	..	0-43	..	11-93	2-05	1-53	0-04	4-43	20-41	21-77
171	Jampur ..	9,430	233	449	47-61	..	..	..	117	17	53	..	..	3	..	..	3	113	303	..	..	..	12-41	1-80	5-62	0-32	11-98	32-13	28-74
172	Dajal ..	6,186	193	404	65-31	..	..	..	178	11	24	..	..	..	..	..	2	54	269	..	..	..	28-77	1-78	3-88	0-32	8-73	43-49	44-78
173	Rajapur ..	4,510	130	243	53-88	..	..	..	95	7	12	..	..	..	..	..	..	24	138	..	..	..	21-06	1-55	2-66	..	5-32	30-60	43-02
174	Kot Mithan ..	2,680	54	116	43-28	..	..	..	69	4	7	..	..	..	..	..	..	19	99	..	..	..	25-75	1-49	2-61	..	7-09	36-94	51-49
175	Tausa ..	7,506	71	124	16-32	..	..	..	93	1	5	..	..	1	..	..	1	8	108	..	..	..	12-39	0-13	0-67	0-13	1-07	14-39	*
Total ..		2,926,926	61,307	116,508	40-04	45	1,646	109	30,794	3,748	13,305	45	18	698	32	30	823	17,980	68,450	0-02	0-57	0-04	10-58	1-29	4-57	0-28	6-18	23-52	21-10
Total for the Province.		23,460,267	549,975	1,042,624	44-44	160	11,626	1,789	460,731	12,345	55,337	202	172	5,772	708	159	7,013	111,541	660,542	0-01	0-50	0-08	19-64	0-53	2-36	0-30	4-75	28-16	24-67

\*Not available.



## ANNUAL FORM No. VI-A.

BIRTHS AND DEATHS REGISTERED AMONG THE INDIAN CIVIL POPULATION IN THE CANTONMENTS OF THE PUNJAB DURING THE YEAR 1933.

Number.	CANTONMENTS.										INJURIES.						Ratio of deaths per 1,000 of population.	Total births registered during the year.	Ratio of births per 1,000 of population.	Number.						
	1	2	3	4	5	6	7	8	9	SEXES.				12	13	14					15	16	17	18	19	20
										Males.	Females.	Suicide.														
			Population according to Census of 1931.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.		Males.	Females.														
1																										
1	Ambala ..	..	42,118	..	7	..	394	53	317	..	..	..	..	..	..	..	376	1,147	27	1,810	43	1				
2	Kasauli ..	..	2,452	..	..	..	10	4	10	..	..	..	9*	..	..	..	9	42	17	38	16	2				
3	Dagshai ..	..	1,448	..	..	..	17	1	..	..	..	..	..	..	..	..	8	26	18	56	30	3				
4	Subathu ..	..	1,315	..	..	..	9	..	..	..	..	..	..	..	..	..	15	24	18	38	29	4				
5	Jutogh ..	..	429	..	..	..	7	1	1	..	..	..	1	..	..	..	7	17	40	16	37	5				
6	Dharamsala ..	..	326	..	..	..	20	6	9	..	..	..	..	..	..	..	..	35	107	102	313	6				
7	Jullundur ..	..	9,990	..	..	..	57	4	21	..	..	..	1	..	..	..	32	115	12	229	23	7				
8	Ferozepore ..	..	20,179	..	..	..	320	5	89	..	..	..	5	..	..	..	8	427	21	784	39	8				
9	Lahore ..	..	19,615	..	..	..	61	2	6	..	..	..	1	..	..	..	9	79	4	223	11	9				
10	Amritsar ..	..	959	..	..	..	7	..	1	..	..	..	..	..	..	..	4	12	13	29	30	10				
11	Dalhousie ..	..	695	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	6	11				
12	Bakloh ..	..	1,002	..	..	..	26	2	21	..	..	..	..	..	..	..	1	50	50	150	150	12				
13	Sialkot ..	..	8,805	..	..	..	62	11	58	1	..	..	5	..	..	..	28	165	19	333	38	13				
14	Jhelum ..	..	2,433	..	..	..	4	1	..	..	..	..	..	..	..	..	5	10	4	32	13	14				
15	Rawalpindi..	..	33,610	..	4	..	77	5	74	..	..	..	1	..	..	..	83	244	7	591	18	15				
16	Murree ..	..	425	..	..	..	4	..	..	..	..	..	1	..	..	..	4	9	21	7	16	16				
17	Campbellpur ..	..	1,695	..	..	..	9	..	1	..	..	..	..	..	..	..	4	14	8	37	22	17				
18	Multan ..	..	7,790	..	..	..	26	1	3	..	..	..	..	..	..	..	18	48	6	155	20	18				
	Total ..	..	155,286	..	11	..	1,110	96	611	1	..	25	10	14	10	25	611	2,464	16	4,635	30					

\*Deaths are due to rabies.



# ANNUAL FORM No. VI-B.

DEATHS REGISTERED FROM FEVERS, DYSENTERY AND DIARRHOEA AND RESPIRATORY DISEASES IN MUNICIPAL TOWNS IN THE PUNJAB IN CHARGE OF WHOLETIME MEDICAL OFFICERS OF HEALTH DURING THE YEAR 1933.

Number.	Towns.	FEVERS.						DYSENTERY AND DIARRHOEA.		RESPIRATORY DISEASES.				Number.
		Malaria.	Enteric fever.	Measles.	Relapsing fever.	Typhus fever.	Other fevers.	Dysentery.	Diarrhoea.	Pneumonia.	Influenza.	Pulmonary Tuberculosis.	Other respiratory diseases.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Ambala	4	12	15	..	..	311	23	31	96	..	36	38	1
2	Simla	10	6	..	..	..	4	1	7	198	..	11	27	2
3	Jullundur	3	25	101	..	..	563	75	24	187	..	86	138	3
4	Ludhiana	18	122	28	..	..	226	98	40	322	..	182	69	4
5	Ferozepore	27	2	4	..	..	88	18	30	199	..	14	48	5
6	Lahore	119	6	92	..	..	2,751	182	36	1,130	..	516	33	6
7	Kasur	87	214	81	1	5	85	15	22	70	..	48	60	7
8	Amritsar	38	52	134	..	..	2,651	118	74	262	..	206	1,744	8
9	Sialkot	4	47	29	..	..	847	170	26	216	..	142	215	9
10	Sargodha	16	25	4	..	..	33	8	43	87	..	10	5	10
11	Rawalpindi	10	95	18	..	..	801	81	16	282	..	76	101	11
12	Lyalpur	4	20	4	..	..	430	8	25	109	..	4	16	12
13	Multan	213	263	62	..	..	21	45	621	683	1	171	286	13
	Total	553	889	572	1	5	8,711	846	1,328	3,841	1	1,502	2,780	



DEATHS REGISTERED FROM CHOLERA IN THE DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1933.

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## ANNUAL FORM No. VIII.

DEATHS REGISTERED FROM SMALL-POX IN THE DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1933.

1	2	3	4	5					6		7	8	9	10														
Number.	Districts.	Circles of registration.		Villages.		Months.												Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 for previous five years.	Number.						
		Number in each district.	Number from small-pox were reported.	Number in each district.	Number from small-pox were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Males.	Females.	Total.								
1	AMBALA DIVISION.	26	19	63	60	44	40	81	136	184	165	14	3	4	1	1	2	298	315	613	185	296	0-61	0-76	0-68	0-51	1	
2	Hissar	21	18	722	18	14	24	10	25	33	21	8	..	1	..	1	1	69	70	139	33	93	0-16	0-19	0-17	0-26	2	
3	Rohtak	23	10	1,366	15	5	6	16	14	9	2	9	..	..	..	..	..	31	30	61	12	45	0-08	0-09	0-08	0-11	3	
4	Gurgaon	26	11	1,390	8	2	3	3	4	17	3	..	..	..	..	..	..	17	14	31	5	23	0-04	0-04	0-04	0-12	4	
5	Karnal	23	13	1,723	19	9	4	15	16	13	14	5	1	..	..	..	..	44	33	77	11	28	0-11	0-10	0-11	0-12	5	
6	Ambala	6	1	298	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..	..	0-04	..	0-03	0-20	6
7	JULLUNDUR DIVISION.	18	10	709	38	31	51	27	15	11	12	9	5	..	..	1	..	101	61	162	26	14	0-24	0-16	0-20	0-07	7	
8	Kangra	20	18	2,108	96	78	91	129	132	135	172	103	54	20	16	15	41	493	493	986	256	430	0-89	1-03	0-96	0-53	8	
9	Hoshiarpur	18	13	1,221	41	14	10	18	15	6	9	5	2	1	..	..	2	49	33	82	17	34	0-10	0-08	0-09	0-11	9	
10	Jullundur	16	8	840	10	26	16	19	9	8	2	..	..	..	..	..	..	42	40	82	32	27	0-11	0-13	0-12	0-23	10	
11	Ludhiana	30	23	1,497	330	37	52	61	41	63	50	15	10	5	6	4	9	182	171	353	94	163	0-29	0-33	0-31	0-28	11	
12	Ferozepore	33	30	1,121	301	267	118	118	122	172	166	130	33	32	7	4	11	665	515	1,180	974	178	0-85	0-89	0-87	0-61	12	
13	LAHORE DIVISION.	19	16	1,035	92	85	46	38	18	32	22	17	8	6	2	2	1	135	142	277	89	115	0-22	0-29	0-25	0-22	13	
14	Lahore	27	21	2,246	83	19	22	15	10	16	25	15	9	7	..	..	..	58	80	138	33	43	0-11	0-18	0-14	0-15	14	
15	Gurdaspur	19	17	2,053	349	129	89	68	58	92	95	48	12	1	1	3	7	317	286	603	156	263	0-60	0-65	0-62	0-41	15	
16	Sialkot	18	18	1,212	220	75	104	121	80	107	92	77	12	6	2	..	..	357	319	676	193	317	0-87	0-97	0-92	0-38	16	
17	Gujranwala	19	18	1,214	340	135	158	165	145	150	119	64	32	14	4	3	2	546	445	991	251	555	1-42	1-42	1-42	0-29	17	
18	Sheikhpura	19	19	1,440	108	101	104	113	86	65	33	24	8	..	4	..	1	298	241	539	160	281	0-60	0-57	0-58	0-52	18	
19	RAWALPINDI DIVISION.	25	24	973	326	284	219	172	189	167	83	42	15	4	..	7	9	571	620	1,191	229	691	1-28	1-65	1-45	0-43	19	
20	Gujrat	16	15	884	135	84	83	93	56	47	49	32	11	9	..	9	21	224	270	494	116	295	0-80	1-05	0-92	0-23	20	
21	Shahpur	16	12	1,170	80	22	36	24	20	22	19	14	5	4	1	8	11	80	106	186	49	58	0-24	0-37	0-30	0-12	21	
22	Jhelum	15	14	615	67	32	36	40	41	45	33	24	13	..	8	1	7	129	135	264	48	137	0-42	0-49	0-46	0-14	22	
23	Attock	16	14	398	38	3	6	7	7	6	26	22	8	4	2	3	7	42	59	101	25	32	0-19	0-30	0-25	0-05	23	
24	Manwali	26	26	1,833	95	91	111	150	154	143	124	84	34	4	6	3	2	460	446	906	194	521	0-83	1-00	0-91	0-26	24	
25	MULTAN DIVISION.	25	23	1,355	213	124	132	132	127	84	61	35	16	5	2	..	..	363	355	718	163	355	0-58	0-68	0-62	0-21	25	
26	Montgomery	15	13	1,017	263	27	40	47	50	61	53	42	19	4	1	1	4	164	185	349	87	146	0-46	0-60	0-53	0-09	26	
27	Lyalpur	26	23	1,645	211	46	50	41	40	63	43	22	13	5	3	2	6	178	155	333	79	148	0-28	0-29	0-28	0-13	27	
28	Jhang	24	8	848	13	..	..	..	8	5	1	..	..	..	..	..	..	12	4	16	5	7	0-04	0-01	0-03	0-42	28	
29	Muzaffargarh	25	15	714	52	22	14	10	7	1	3	6	6	6	..	2	..	39	38	77	12	37	0-14	0-17	0-16	0-13	29	
30	Dera Ghazi Khan	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
31	Total	610	470	34,520	3,621	1,806	1,648	1,733	1,625	1,757	1,438	806	329	142	66	72	144	5,965	5,061	11,026	3,534	5,332	0-47	0-53	0-50	0-26		



## ANNUAL FORM N. IX-A. &amp; B.

MONTHLY STATEMENT OF PLAGUE OCCURRENCES IN BRITISH DISTRICTS AND PUNJAB STATES  
IN THE PUNJAB DURING THE YEAR 1933.



## ANNUAL FORM No. IX-A.

DEATHS REGISTERED FROM PLAGUE IN THE DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1933.

1	2	3	4	5	6	7	8	9																		
Number.	Districts.	CIRCLES OF REGISTRATION.		MONTHS.												TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 for previous five years.	Number.			
		VILLAGES.																								
		Number in each district.	Number from which deaths were reported.	Number in each district.	Number from which deaths were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Males.	Females.	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	
1	AMBALA DIVISION.																									
1	Hissar	26		963																					0.17	1
2	Rohitak	21		722																					0.14	2
3	Gurgaon	23		1,395																					0.11	3
4	Karnal	26		1,390																					0.17	4
5	Ambala	23		1,723																					0.65	5
6	Simla	6		208																						6
7	JULLUNDUR DIVISION.																									7
7	Kangra	18		709																					0.001	7
8	Hoshiarpur	20	11	2,108	105	41	14	47	228	364	47														0.56	8
9	Jullundur	18	3	1,221	3																				0.03	9
10	Ludhiana	16		840																					0.02	10
11	Ferozepore	39		1,497																					0.002	11
12	LAHORE DIVISION.																									12
12	Lahore	33	1	1,121																					0.09	12
13	Amritsar	19	3	1,035	7																				0.01	13
14	Gurdaspur	27	8	2,246	15																				0.78	14
15	Sialkot	19	6	2,033	24																				0.09	15
16	Gojranwala	18	1	1,212																					0.03	16
17	Sheikhpura	19		1,214																					0.01	17
18	RAWALPINDI DIVISION.																									18
18	Gujrat	19	8	1,440	19																				0.02	19
19	Shahpur	25		973																					0.01	20
20	Jhelum	16		884																						21
21	Rawalpindi	16		1,170																						22
22	Attock	15		615																						23
23	Mianwali	16		398																						24
24	MULTAN DIVISION.																									25
24	Montgomery	26	1	1,833	1																				0.001	26
25	Lyallpur	25		1,355																						27
26	Jhang	15		1,017																					0.002	28
27	Multan	26		1,645																						29
28	Muzaffargarh	24		848																						30
29	Dera Ghazi Khan	25		714																						31
Total		610	42	34,520	174	43	18	73	400	735	115	12		11	24	94	264	757	1,032	1,789	0.06	0.10	0.08		0.12	



MONTHLY STATEMENT OF PLAGUE OCCURRENCES IN BRITISH

Number.	Districts and Punjab States.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
		Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Hissar .. ..	..	..	..	..	..	..	..	..	..	..	..	..
2	Rohtak .. ..	..	..	..	..	..	..	..	..	..	..	..	..
3	Gurgaon .. ..	..	..	..	..	..	..	..	..	..	..	..	..
4	Karnal .. ..	..	..	..	..	..	..	..	..	..	..	..	..
5	Ambala .. ..	..	..	..	..	..	..	..	..	..	..	..	..
6	Simla .. ..	..	..	..	..	..	..	..	..	..	..	..	..
7	Kangra .. ..	..	..	..	..	..	..	..	..	..	..	..	..
8	Hoshiarpur ..	73	41	60	14	141	47	464	228	606	364	12	47
9	Jullundur ..	..	..	..	..	..	..	..	..	..	..	..	..
10	Ludhiana ..	..	..	..	..	..	..	..	..	..	..	..	..
11	Ferozepore ..	..	..	..	..	..	..	..	..	..	..	..	..
12	Lahore .. ..	..	..	..	..	..	..	..	..	..	..	..	..
13	Amritsar ..	..	..	2	..	2	1	9	1	1	3	..	..
14	Gurdaspur ..	1	2	3	1	23	3	15	22	39	14	1	12
15	Sialkot .. ..	..	..	..	..	12	3	38	22	72	39	2	15
16	Gujranwala ..	..	..	..	..	..	..	1	1	..	..	..	..
17	Sheikhupura ..	..	..	..	..	..	..	2	..	..	..	..	..
18	Gujrat .. ..	..	..	4	3	96	19	201	126	402	314	35	41
19	Shahpur .. ..	..	..	..	..	..	..	..	..	..	..	..	..
20	Jhelum .. ..	..	..	..	..	..	..	..	..	..	..	..	..
21	Rawalpindi ..	..	..	..	..	..	..	..	..	..	..	..	..
22	Attock .. ..	..	..	..	..	..	..	..	..	..	..	..	..
23	Mianwali .. ..	..	..	..	..	..	..	..	..	..	..	..	..
24	Montgomery ..	..	..	..	..	..	..	..	..	..	..	..	..
25	Lyallpur .. ..	..	..	..	..	..	..	..	..	1	1	..	..
26	Jhang .. ..	..	..	..	..	..	..	..	..	..	..	..	..
27	Multan .. ..	..	..	..	..	..	..	..	..	..	..	..	..
28	Muzaffargarh ..	..	..	..	..	..	..	..	..	..	..	..	..
29	Dera Ghazi Khan ..	..	..	..	..	..	..	..	..	..	..	..	..
	Total of British Districts	74	43	69	18	274	73	73	400	1,121	735	50	115
1	Patiala .. ..	..	..	..	..	..	..	..	..	..	..	..	..
2	Bahawalpur ..	..	..	..	..	..	..	..	..	..	..	..	..
3	Jind .. ..	..	..	..	..	..	..	..	..	..	..	..	..
4	Nabha .. ..	..	..	..	..	..	..	..	..	..	..	..	..
5	Kapurthala ..	..	..	..	..	30	9	2	4	2	2	..	..
6	(Sirmoor) Nahan ..	..	..	..	..	..	..	..	..	..	..	..	..
7	Malerkotla ..	..	..	..	..	..	..	..	..	..	..	..	..
8	Faridkot .. ..	..	..	..	..	..	..	..	..	..	..	..	..
9	Pataudi .. ..	..	..	..	..	..	..	..	..	..	..	..	..
10	Kalsia .. ..	..	..	..	..	..	..	..	..	..	..	..	..
11	Dujana .. ..	..	..	..	..	..	..	..	..	..	..	..	..
12	Nalagarh .. ..	..	..	..	..	..	..	..	..	..	..	..	..
	Total of Punjab States	..	..	..	..	30	9	2	4	2	2	..	..
	GRAND TOTAL ..	74	43	69	18	304	82	732	404	1,123	737	50	115



No. IX-B.

DISTRICTS AND PUNJAB STATES IN THE PUNJAB DURING THE YEAR 1933.

JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.		TOTAL.		Number.
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
..	..	..	..	..	..	..	..	..	..	..	..	..	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	5
..	..	..	..	..	..	..	..	..	..	..	..	..	..	6
..	..	..	..	..	..	..	..	..	..	..	..	..	..	7
..	4	..	..	11	3	19	8	146	52	199	147	1,731	955	8
..	..	..	..	..	..	1	1	8	3	45	31	54	35	9
..	..	..	..	..	..	..	..	..	..	..	..	..	..	10
..	..	..	..	..	..	..	..	..	..	..	..	..	..	11
..	..	..	..	..	..	..	..	2	1	..	..	2	1	12
..	..	..	..	..	..	8	3	22	15	55	18	99	41	13
..	..	..	..	..	..	..	..	..	..	29	13	111	67	14
..	..	..	..	..	..	..	..	..	..	27	5	151	84	15
..	..	..	..	..	..	..	..	..	..	..	..	1	1	16
..	..	..	..	..	..	..	..	..	..	..	..	2	..	17
..	8	..	..	12	8	25	12	72	23	47	50	894	604	18
..	..	..	..	..	..	..	..	..	..	..	..	..	..	19
..	..	..	..	1	..	..	..	..	..	..	..	1*	..	20
..	..	..	..	..	..	..	..	..	..	..	..	..	..	21
..	..	..	..	..	..	..	..	..	..	..	..	..	..	22
..	..	..	..	..	..	..	..	..	..	..	..	..	..	23
..	..	..	..	..	..	..	..	..	..	..	..	..	..	24
..	..	..	..	..	..	..	..	..	..	..	..	1	1	25
..	..	..	..	..	..	..	..	..	..	..	..	..	..	26
..	..	..	..	..	..	..	..	..	..	..	..	..	..	27
..	..	..	..	..	..	..	..	..	..	..	..	..	..	28
..	..	..	..	..	..	..	..	..	..	..	..	..	..	29
..	12	..	..	24	11	53	24	250	94	402	264	3,047	1,789	
..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
..	..	..	..	..	..	..	..	..	..	..	..	..	..	4
..	..	..	..	..	..	..	..	..	..	..	..	34	15	5
..	..	..	..	..	..	..	..	..	..	..	..	..	..	6
..	..	..	..	..	..	..	..	..	..	..	..	..	..	7
..	..	..	..	..	..	..	..	..	..	..	..	..	..	8
..	..	..	..	..	..	..	..	..	..	..	..	..	..	9
..	..	..	..	..	..	..	..	..	..	..	..	..	..	10
..	..	..	..	..	..	..	..	..	..	..	..	..	..	11
..	..	..	..	..	..	..	..	..	..	..	..	..	..	12
..	..	..	..	..	..	..	..	..	..	..	..	34	15	
..	12	..	..	24	11	53	24	250	94	402	264	3,081	1,804	

(Lalamusa, District Gujrat).



## ANNUAL FORM No. X.

DEATHS REGISTERED FROM FEVERS IN THE DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1933.

Number.	DISTRICTS.	CIRCLES OF REGISTRATION.	VILLAGES.	MONTHS.												TOTAL.	RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 for previous five years.	Number.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
				Number in each district.		Number from which deaths from fevers were reported.		January.	February.	March.	April.	May.	June.	July.	August.		September.	October.	November.			December.	Males.	Females.	Total.	Males.	Females.	Total.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
				3	4	5	6																						7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
1	AMBALA DIVISION.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											



## ANNUAL FORM No. XI.

## DEATHS REGISTERED FROM DYSENTERY AND DIARRHOEA IN THE DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1933.

1	2	3	4	5	6	7	8																		
Number.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.		MONTHS.						TOTAL.		RATIO OF DEATHS PER 1,000 OF POPULATION.		Mean ratio per 1,000 for previous five years.									
		Number in each district.	Number from which deaths from Dysentery and Diarrhoea were reported.	Number in each district.	Number from which deaths from Dysentery and Diarrhoea were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.		November.	December.	Males.	Females.	Total.				
1	AMBALA DIVISION.																								
2	Hissar ..	26	25	963	160	11	18	24	24	37	27	26	16	31	34	33	21	161	141	302	0.33	0.34	0.38		
3	Rohatak ..	21	19	722	105	10	10	8	14	38	31	34	20	26	31	39	25	165	121	286	0.38	0.32	0.30		
4	Gurgaon ..	23	21	1,366	94	8	6	8	17	17	32	24	23	24	26	33	15	124	109	233	0.31	0.32	0.40		
5	Karnal ..	26	25	1,390	120	4	5	11	17	23	24	14	22	12	19	24	15	100	90	190	0.21	0.21	0.55		
6	Ambala ..	23	21	1,723	102	13	14	7	21	26	28	28	27	27	35	32	43	173	128	301	0.42	0.40	0.41		
7	Simla ..	6	5	208	40	6	..	4	2	3	5	8	9	4	6	2	1	26	24	50	1.14	1.91	1.80		
8	JULLUNDHUR DIVISION.																								
9	Kangra ..	18	18	709	709	245	219	203	184	237	231	158	201	241	241	203	179	1,221	1,321	2,542	2.95	3.43	3.18	4.01	
10	Hoshiarpur ..	20	19	2,108	356	39	25	29	43	53	59	40	49	49	75	55	61	322	255	577	0.58	0.53	0.56	0.43	
11	Jullunder ..	18	18	1,221	85	19	6	14	31	42	20	8	38	34	45	20	17	161	138	299	0.32	0.32	0.34	0.34	
12	Ludhiana ..	16	16	849	100	23	2	10	9	13	33	64	29	25	11	11	18	138	110	248	0.37	0.37	0.37	0.25	
13	Ferozepore ..	30	25	1,497	120	12	8	11	18	24	39	22	21	42	18	17	9	122	119	241	0.19	0.23	0.21	0.30	
14	LAHORE DIVISION.																								
15	Lahore ..	33	30	1,121	196	75	53	82	89	114	84	83	102	97	43	64	59	544	401	945	0.70	0.69	0.69	0.81	
16	Amritsar ..	19	19	1,035	140	13	2	13	21	43	33	17	21	47	81	38	27	211	165	376	0.34	0.33	0.34	0.34	
17	Gurdaspur ..	27	24	2,246	285	27	26	29	25	45	51	30	22	38	72	98	42	251	245	496	0.47	0.56	0.51	0.95	
18	Sialkot ..	19	18	2,053	302	21	11	14	24	56	30	52	67	97	76	84	91	359	264	623	0.68	0.60	0.64	0.45	
19	Gujranwala ..	18	17	1,212	51	6	7	3	13	13	10	9	13	22	14	9	9	72	56	128	0.18	0.17	0.17	0.16	
20	Sheikhpura ..	19	19	1,214	22	3	7	6	6	13	8	3	7	15	6	5	7	55	31	86	0.14	0.10	0.12	0.09	
21	RAWALPINDI DIVISION.																								
22	Gujrat ..	19	19	1,440	68	7	6	11	12	26	16	21	19	20	27	33	23	97	124	221	0.19	0.29	0.24	0.15	
23	Shahpur ..	25	25	973	158	5	12	11	17	26	34	29	21	25	30	40	26	141	135	276	0.32	0.36	0.34	0.37	
24	Jhelum ..	16	16	884	68	6	5	7	9	12	7	12	13	13	14	10	16	81	43	124	0.29	0.17	0.23	0.22	
25	Rawalpindi ..	16	13	1,170	879	201	163	116	106	126	147	118	139	155	175	168	151	939	826	1,765	2.83	2.87	2.85	2.85	
26	Attock ..	15	10	615	35	..	..	13	1	5	6	3	5	4	1	1	9	33	30	63	0.11	0.11	0.11	0.05	
27	Mianwali ..	16	14	398	26	..	..	1	2	1	11	5	9	10	7	15	4	36	29	65	0.17	0.15	0.16	0.14	
28	MULTAN DIVISION.																								
29	Montgomery ..	26	26	1,833	73	36	17	45	33	12	19	19	12	26	26	15	5	153	112	265	0.28	0.25	0.27	0.10	
30	Lyallpur ..	25	22	1,355	100	4	3	4	24	18	24	12	11	24	21	5	1	83	68	151	0.13	0.13	0.13	0.13	
31	Jhang ..	15	15	1,017	80	10	5	11	18	19	16	15	6	29	20	6	8	92	71	163	0.26	0.23	0.25	0.26	
32	Multan ..	26	24	1,645	309	30	22	22	78	71	66	52	77	64	90	117	471	629	531	1,160	0.98	1.01	0.99	0.39	
33	Muzaffargarh ..	24	14	848	30	4	2	6	2	1	2	1	5	3	8	13	6	30	23	53	0.09	0.08	0.09	0.17	
34	Dera Ghazi Khan ..	25	15	714	24	9	4	6	9	10	12	8	9	12	6	16	15	62	54	116	0.23	0.24	0.24	0.33	
35	Total ..	610	552	34,520	4,837	847	658	725	869	1,124	1,105	915	1,013	1,216	1,258	1,241	1,374	6,581	5,764	12,345	0.51	0.54	0.53	0.54	



## ANNUAL FORM No. XII.

## DEATHS REGISTERED FROM RESPIRATORY DISEASES IN THE DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1933.

1	2	3	4	CIRCLES OF REGISTRATION.			VILLAGES.		MONTHS.												TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			5	6	7	8
Number.	Districts.	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.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.	Mean ratio per 1,000 for previous five years.						
1	AMBALA DIVISION.																													
2	Hissar ..	26	23	963	300	27	58	45	45	49	33	31	23	24	31	45	47	229	229	458	0.47	0.55	0.51	1.43						
3	Rohatak ..	21	20	722	359	174	138	144	89	91	107	62	57	48	88	131	116	704	541	1,245	1.63	1.45	1.55	1.90						
4	Gurgaon ..	23	23	1,366	623	151	154	150	122	95	120	90	83	59	83	171	214	840	669	1,509	2.11	1.96	2.04	2.68						
5	Karnal ..	26	26	1,390	659	159	141	121	126	106	60	67	66	58	101	101	193	720	1,299	1,299	1.53	1.51	1.52	1.59						
6	Ambala ..	23	21	1,723	1,600	993	736	847	791	698	80	53	61	48	72	112	203	2,640	2,063	4,703	6.41	6.46	6.43	9.68						
7	Simla ..	6	4	208	150	32	37	27	29	41	38	39	40	34	19	22	25	221	162	383	9.65	12.87	10.79	5.27						
8	JULLUNDHUR DIVISION.																													
9	Kaogre ..	18	18	709	709	399	413	364	339	378	371	296	333	424	411	479	421	2,291	2,328	4,619	5.53	6.04	5.78	6.51						
10	Hoshiarpur ..	20	20	2,108	1,527	301	251	217	181	196	133	148	160	136	178	198	233	1,275	1,057	2,332	3.31	3.20	3.26	2.25						
11	Jullundur ..	18	18	1,221	262	214	233	180	158	182	137	145	134	150	186	176	191	1,321	865	2,086	2.41	2.01	2.22	2.07						
12	Ludhiana ..	16	16	849	520	81	116	120	133	112	115	101	95	157	171	260	107	813	725	1,568	2.24	2.44	2.33	1.94						
13	Ferozepore ..	30	30	1,497	1,370	344	296	212	123	131	146	113	102	75	115	149	204	1,129	881	2,010	1.80	1.70	1.76	2.13						
14	LAHORE DIVISION.																													
15	Lahore ..	33	33	1,121	795	919	575	362	391	351	262	267	135	239	145	274	396	2,433	1,883	4,316	3.12	3.24	3.17	2.83						
16	Amritsar ..	19	19	1,035	1,016	425	349	405	178	546	570	509	279	663	355	804	747	3,090	2,740	5,830	4.98	5.52	5.22	3.48						
17	Gurdaspur ..	27	24	2,246	835	407	325	337	236	297	205	90	90	156	202	168	330	1,393	1,200	2,593	3.00	2.88	2.95	2.89						
18	Sialkot ..	19	19	2,053	1,985	593	384	305	232	265	246	217	281	326	343	398	443	2,331	1,702	4,033	4.40	3.86	4.16	3.49						
19	Gujranwala ..	18	18	1,212	261	225	110	73	57	52	44	60	29	41	25	18	82	529	287	816	1.29	0.88	1.11	1.07						
20	Sheikhpura ..	19	18	1,214	229	194	109	59	27	33	21	24	28	25	16	29	72	369	268	637	0.96	0.86	0.91	0.58						
21	RAWALPINDI DIVISION.																													
22	Gujrat ..	19	19	1,440	428	375	179	165	141	151	133	105	135	143	152	139	153	1,112	859	1,971	2.23	2.03	2.14	1.90						
23	Shahpur ..	25	25	973	573	394	228	160	154	124	101	82	62	57	91	140	208	1,073	737	1,810	2.41	1.96	2.20	2.45						
24	Jhelum ..	16	16	884	395	151	123	91	77	83	63	63	71	45	69	62	80	578	445	1,923	2.07	1.72	1.91	2.01						
25	Rawalpindi ..	16	14	1,170	922	297	263	177	112	137	110	92	112	95	98	167	175	1,025	810	1,835	3.09	2.81	2.96	2.69						
26	Attock ..	15	15	615	418	114	88	60	68	56	39	51	60	59	46	84	50	434	311	745	1.43	1.13	1.28	1.32						
27	Mianwali ..	16	16	398	175	28	26	19	18	28	37	42	33	33	35	44	40	294	179	383	0.94	0.92	0.93	1.03						
28	MULTAN DIVISION.																													
29	Montgomery ..	26	26	1,833	178	231	300	198	57	20	8	21	8	39	19	45	65	566	436	1,002	1.02	0.97	1.00	0.63						
30	Lyallpur ..	25	25	1,355	1,219	431	264	196	157	123	131	89	95	78	77	74	137	1,025	827	1,852	1.63	1.59	1.61	0.88						
31	Jhang ..	15	15	1,017	782	295	248	204	149	107	76	76	57	43	67	86	93	910	636	1,516	2.56	2.96	2.33	2.10						
32	Multan ..	26	25	1,645	425	232	227	160	155	142	93	96	71	60	78	92	229	837	798	1,635	1.39	1.51	1.40	1.34						
33	Muzaffargarh ..	24	24	848	311	91	99	44	44	44	16	22	39	24	36	37	44	293	224	517	0.91	0.83	0.87	0.57						
34	Dera Ghazi Khan ..	25	25	714	72	43	36	46	25	16	16	22	11	15	21	16	27	180	141	321	0.67	0.64	0.65	0.66						
Total	..	610	595	34,520	19,098	8,320	6,516	5,497	4,405	4,596	3,541	3,068	2,707	3,396	3,337	4,557	5,397	30,665	24,642	55,337	2.40	2.31	2.36	2.32						



STATEMENT No. 1.—SHOWING PARTICULARS OF VACCINATION IN THE PUNJAB PROVINCE  
DURING THE YEAR 1933-34.



## ANNUAL FORMS

## A.—VACCINE

## STATEMENT No. I.—SHOWING PARTICULARS OF VACCINATION

Number.	Division.	(a) Districts excluding Municipal towns. (b) Municipal towns.	Population of districts (exclud- ing municipal towns) and municipal towns according to Census of 1931.	Average population of districts per square mile.	Average number of vaccinators employed throughout the year.	TOTAL NUMBER OF PER- SONS VACCINATED.			Average number of persons vacci- nated by each vaccinator.	PRIMARY VACCINATION.			
						Males.	Females.	Total.		Total.	Successful.		
											Under one year.	One year and under six years.	Total of all ages.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
(a) Districts excluding Municipal towns.													
1	AMBALA DIVISION.	Hissar .. ..	801,081	173	17	38,426	22,330	60,756	3,574	33,719	25,563	3,490	29,180
2		Rohtak .. ..	723,169	326	14	45,602	25,464	71,066	5,076	30,200	23,696	3,582	27,298
3		Gurgaon .. ..	680,880	327	16	115,554	55,984	171,538	10,721	27,015	18,894	5,382	24,332
4		Karnal .. ..	756,302	273	14	55,561	27,380	82,941	5,924	31,473	21,348	3,357	29,896
5		Ambala .. ..	618,806	106	15	56,023	31,412	87,435	5,829	24,579	17,127	4,465	21,781
6		Simla .. ..	14,160	351	..					No local staff is employed vaccination			
		Total .. ..	3,594,398	..	76	311,166	162,570	473,736	6,233	146,986	106,628	20,276	132,487
(b) Municipal towns.													
1	AMBALA DIVISION.	Hissar .. ..	25,179	..	1	1,937	733	2,670	2,670	1,131	831	81	996
2		Hansi .. ..	18,356	..	..	798	434	1,232	..	767	695	39	741
3		Bhiwani .. ..	35,866	..	1	903	754	1,657	1,657	1,481	1,129	174	1,321
4		Sirsa .. ..	18,909	..	1	758	334	1,092	1,092	557	473	56	534
5		Rohtak .. ..	35,235	..	1	1,054	730	1,784	1,784	1,189	1,089	29	1,120
6		Jhajjar .. ..	12,232	..	..	832	493	1,325	..	474	336	65	402
7		Gohana .. ..	5,045	..	..	304	60	364	..	128	86	8	95
8		Bahadurgarh ..	6,963	..	..	105	90	195	..	185	177	5	182
9		Sonepat .. ..	15,050	..	1	193	148	341	341	277	262	6	268
10		Beri .. ..	7,877	..	..	52	48	100	..	92	75	11	86
11		Rewari .. ..	26,269	..	1	1,691	891	2,582	2,582	1,100	1,003	57	1,074
12		Palwal .. ..	10,807	..	1	1,101	510	1,611	1,611	488	461	22	484
13		Firozpur-Jhirka ..	5,390	..	..	299	101	400	..	209	203	3	207
14		Hodal .. ..	7,258	..	..	1,502	999	2,501	..	280	263	16	280
15		Ballabgarh .. ..	4,162	..	..	369	62	431	..	153	127	16	143
16		Faridabad .. ..	5,134	..	..	290	130	420	..	227	207	18	227
17		Karnal .. ..	26,610	..	1	1,215	889	2,104	2,104	944	658	140	813
18		Kaithal .. ..	19,418	..	1	733	318	1,051	1,051	663	588	64	652
19		Panipat .. ..	32,915	..	1	1,002	745	1,747	1,747	1,351	1,313	39	1,344
20		Shahabad .. ..	12,293	..	1	804	267	1,071	1,071	384	317	52	369
21		Thanesar .. ..	5,032	..	1	179	78	257	257	128	73	31	104
22		Ambala .. ..	34,855	..	1	1,259	925	2,184	2,184	1,305	1,102	176	1,282
23		Jagadhri .. ..	13,268	..	1	346	315	661	661	600	450	67	517
24		Burya .. ..	3,494	..	..	58	57	115	..	106	63	26	89
25		Sadhaura .. ..	7,769	..	1	341	144	485	485	303	236	16	252
26		Rupar .. ..	8,764	..	1	744	281	1,025	1,025	322	273	40	316
27		Simla .. ..	18,144	..	2	6,743	1,164	7,907	3,954	441	234	77	314
		Total of Municipal towns..	422,294	..	18	25,612	11,700	37,312	2,073	15,285	12,724	1,325	14,212
		Total of Ambala Division..	4,016,692	..	94	3,36,778	174,270	511,048	5,437	162,271	119,352	21,601	146,699
(a) Districts excluding Municipal towns.													
1	JULLANDER DIVISION.	Kangra .. ..	794,832	80	14	77,521	55,911	133,432	9,531	24,052	16,943	5,102	22,070
2		Hoshiarpur .. ..	995,941	459	13	44,695	25,221	69,916	5,378	33,825	24,902	6,640	32,298
3		Jullundur .. ..	810,353	655	13	36,416	20,441	56,857	4,374	31,350	26,752	1,658	28,681
4		Ludhiana .. ..	564,972	463	11	66,553	42,332	108,885	9,899	21,448	17,311	2,454	19,861
5		Ferozepore .. ..	1,021,651	267	20	85,885	49,545	135,430	6,772	39,181	33,396	3,639	37,363
		Total .. ..	4,187,749	..	71	311,070	193,450	504,520	7,106	149,856	119,304	19,493	140,273
(b) Municipal towns.													
1	JULLANDER DIVISION.	Dharmasala .. ..	3,976	..	..	667	222	889	..	130	95	35	130
2		Hoshiarpur .. ..	26,730	..	1	1,033	619	1,652	1,652	767	586	160	749
3		Tanda Urmar .. ..	9,510	..	..	264	185	449	..	314	267	28	206
4		Jullundur .. ..	73,141	..	4	5,896	3,728	9,624	2,406	2,934	2,215	480	2,804
5		Kartarpur .. ..	9,878	..	1	785	486	1,271	1,271	470	386	28	418
6		Banga .. ..	5,840	..	..	308	281	589	..	225	186	20	207
7		Rahon .. ..	6,692	..	1	664	358	1,022	1,022	271	209	36	246
8		Phillaur .. ..	5,168	..	..	673	302	975	..	210	169	31	200
9		Nurmahal .. ..	7,079	..	..	234	147	381	..	272	233	14	252
10		Nakodar .. ..	9,584	..	..	403	422	825	..	355	310	45	355
11		Ludhiana .. ..	68,586	..	3	9,038	4,468	13,506	4,502	2,167	1,530	438	1,997
12		Jagraon .. ..	27,108	..	1	3,879	2,281	6,160	6,160	1,000	485	87	586
13		Raikot .. ..	11,810	..	..	2,701	633	3,334	..	389	348	36	385
14		Ferozepore .. ..	32,653	..	2	5,595	3,320	8,915	4,458	2,033	1,782	151	1,991
15		Zira .. ..	5,318	..	1	776	164	940	940	230	193	24	221
16		Muktsar .. ..	14,839	..	1	952	490	1,442	1,442	522	445	21	468
17		Fazilka .. ..	18,463	..	1	2,006	1,160	3,166	3,166	917	525	51	593
18		Moga .. ..	17,581	..	1	2,247	1,049	3,296	3,296	891	666	124	811
19		Abohar .. ..	14,035	..	1	695	272	967	967	490	336	63	409
		Total of Municipal towns..	367,991	..	18	38,816	20,587	59,403	3,300	14,587	10,966	1,872	13,118
		Total of Jullundur Division	4,555,740	..	89	349,886	214,037	563,923	6,336	164,443	130,270	21,365	153,391



## (vaccination).

## DEPARTMENT.

IN THE PUNJAB PROVINCE DURING THE YEAR 1933-34.

Unknown.	Re-vaccination.			PERCENTAGE OF SUCCESSFUL CASES IN WHICH THE RESULTS WERE KNOWN.		Persons successfully vaccinated per 1,000 of population.	PERCENTAGE OF UNKNOWN CASES TO TOTAL CASES.		AVERAGE ANNUAL NUMBER OF PERSONS SUCCESSFULLY VACCINATED DURING PREVIOUS FIVE YEARS.		AVERAGE ANNUAL NUMBER OF DEATHS FROM SMALL-POX DURING PREVIOUS FIVE YEARS.		Number.
	Total.	Successful.	Unknown.	Primary.	Re-vaccination.		Primary.	Re-vaccination.	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.	
15	16	17	18	19	20	21	22	23	24	25	26	27	28
2,113	27,363	12,473	4,832	92.32	55.36	52.00	6.27	17.66	33,949	42.38	360	0.45	1
1,609	41,013	21,024	6,496	95.48	60.91	66.82	5.33	15.84	34,679	47.95	191	0.26	2
2,280	144,523	114,163	18,199	98.37	90.37	203.41	8.44	12.52	40,041	58.81	75	0.11	3
1,291	51,475	31,419	11,479	99.05	78.56	81.07	4.10	22.30	44,151	58.38	76	0.10	4
2,007	62,856	29,063	15,365	96.50	61.20	82.16	8.17	24.44	31,611	51.08	88	0.14	5
performed by the Special Staff, Punjab.—vide Appendix I to statement No. I.													
9,300	327,230	208,142	56,371	96.22	76.85	94.77	6.33	17.23	184,431	51.31	790	0.22	6
59	1,539	959	281	92.91	76.23	77.64	5.22	18.26	951	37.77	61	2.42	1
10	465	254	26	97.89	57.86	54.21	1.30	5.59	657	35.79	18	0.98	2
50	176	52	31	92.31	35.86	38.28	3.38	17.61	1,058	29.50	30	0.84	3
8	535	341	49	97.27	70.16	46.27	1.44	9.16	595	31.47	10	0.53	4
30	606	400	41	96.64	70.80	43.14	2.52	6.77	1,725	48.96	10	0.28	5
61	851	260	181	97.34	38.81	54.12	12.87	21.27	401	32.78	7	0.57	6
27	236	110	33	94.06	54.19	40.63	21.09	13.98	179	35.48	2	0.40	7
2	10	5	..	98.38	50.00	26.86	..	..	328	47.11	1	0.14	8
3	68	26	11	97.45	45.61	19.53	0.72	16.18	606	40.27	1	0.07	9
17	8	5	..	96.63	62.50	11.55	3.26	..	298	37.83	4	0.51	10
1	1,482	823	437	99.17	78.76	72.21	1.55	29.49	1,087	41.38	1	0.04	11
2	1,123	1,086	..	99.38	96.71	145.28	0.20	..	546	50.52	2	0.19	12
2	191	175	2	100.00	92.59	70.87	0.95	1.05	264	48.98	1	0.19	13
..	2,221	1,955	54	100.00	90.22	307.94	..	2.43	352	48.50	3	0.41	14
..	278	78	117	93.46	48.45	53.10	..	42.09	153	36.76	2	0.48	15
..	193	175	8	100.00	94.59	78.30	..	4.15	195	37.98	..	..	16
127	1,160	480	270	99.51	53.93	48.59	13.45	23.28	1,318	49.53	3	0.11	17
1	388	363	24	98.49	99.73	52.27	0.15	6.19	969	49.90	11	0.57	18
7	396	396	..	100.00	100.00	52.86	0.52	..	1,692	51.41	14	0.43	19
..	687	357	34	96.09	54.67	59.06	..	4.95	489	39.78	..	..	20
24	129	104	25	100.00	100.00	41.34	18.75	19.38	122	24.24	2	0.40	21
20	879	657	45	99.77	78.78	55.63	1.53	5.12	2,493	71.52	2	0.06	22
25	61	2	50	98.91	18.18	39.12	4.17	81.97	524	39.40	1	0.08	23
16	9	2	2	98.89	28.57	26.04	15.09	22.22	110	31.48	..	..	24
20	182	62	10	89.05	36.05	40.42	6.60	5.49	457	58.82	..	..	25
2	703	501	15	98.75	72.82	93.22	0.62	2.13	620	70.74	3	0.34	26
125	7,466	78	7,268	99.37	39.39	21.60	28.34	97.35	1,594	87.85	7	0.39	27
637	22,042	9,706	9,014	97.02	74.50	56.64	4.17	40.89	19,783	46.85	196	0.46	..
9,937	349,272	217,848	65,385	96.30	76.74	90.76	6.12	18.72	204,214	50.84	986	0.25	..
1,929	109,380	48,745	29,560	99.76	61.07	89.09	8.02	27.03	60,555	76.19	68	0.09	1
1,409	36,091	16,299	7,751	99.64	57.51	48.80	4.17	21.48	39,534	39.70	537	0.54	2
1,824	25,593	11,344	3,537	97.14	51.43	49.39	5.82	13.82	31,095	38.37	65	0.08	3
1,361	87,437	26,702	23,275	98.87	41.62	82.42	6.35	26.62	26,318	46.58	70	0.12	4
1,355	96,249	58,508	18,240	98.78	75.00	93.84	3.46	18.95	55,064	53.90	320	0.31	5
7,878	354,750	161,598	82,363	98.80	59.33	72.08	5.26	23.22	212,566	50.76	1,060	0.25	..
..	759	278	173	100.00	47.44	102.62	..	22.79	371	93.31	..	..	1
..	885	499	103	97.65	63.81	46.69	..	11.64	1,872	70.03	14	0.52	2
18	135	64	20	100.00	55.65	37.85	5.73	14.81	378	39.75	19	2.00	3
101	6,690	4,965	303	98.98	77.74	106.22	3.44	4.53	4,929	67.39	16	0.22	4
13	801	423	18	91.47	54.02	85.14	2.77	2.25	597	60.44	2	0.20	5
12	364	63	38	97.18	19.33	46.23	5.33	10.44	186	31.85	..	..	6
16	751	570	35	96.47	79.61	121.94	5.90	4.66	207	30.93	4	0.60	7
6	765	242	38	98.04	33.29	85.53	2.86	4.97	492	95.20	5	0.97	8
17	109	49	10	98.82	49.49	42.52	6.25	9.17	374	52.83	1	0.14	9
..	470	233	5	100.00	50.11	61.35	..	1.06	395	41.21	9	0.94	10
140	11,339	2,922	3,155	98.52	35.70	71.72	6.46	27.82	3,199	46.64	71	1.04	11
413	5,160	740	4,224	99.83	79.06	48.92	41.30	81.86	1,160	42.79	21	0.77	12
4	2,945	2,770	97	100.00	97.26	267.15	1.03	3.29	527	44.62	2	0.17	13
19	6,882	4,394	177	98.86	65.53	195.54	0.93	2.57	2,977	91.17	6	0.18	14
6	710	280	136	98.66	48.78	94.21	2.61	19.15	565	106.24	..	..	15
54	920	391	134	100.00	49.75	57.89	10.34	14.57	979	65.97	9	0.61	16
320	2,249	708	1,364	99.33	80.00	70.47	34.90	60.65	827	44.79	7	0.38	17
39	2,405	1,650	227	95.19	75.76	139.98	4.38	9.44	1,138	64.73	10	0.57	18
44	477	126	27	91.70	28.00	38.12	8.98	5.66	848	60.42	6	0.43	19
1,222	44,816	21,367	10,284	98.15	61.88	93.71	8.38	22.95	22,021	59.84	202	0.55	..
9,100	399,566	182,965	92,647	98.74	59.61	73.83	5.53	23.19	234,587	51.49	1,262	0.28	..



## STATEMENT No. I.—SHOWING PARTICULARS OF VACCINATION

Number.	Division.	(a) Districts excluding Municipal towns. (b) Municipal towns.	Population of districts (exclud- ing municipal towns) and municipal towns according to Census of 1931	Average population of districts per square mile.	Average number of vaccinators employed throughout the year.	TOTAL NUMBER OF PER- SONS VACCINATED.			Average number of persons vacci- nated by each vaccinator.	PRIMARY VACCINATION.				
						Males.	Females.	Total.		Total.	Successful.			
											Under one year.	One year and under six years.	Total of all ages.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
(a) Districts excluding Municipal towns.														
1	LAHORE DIVISION.	Lahore .. ..	859,109	508	14	53,915	31,999	85,914	6,137	41,153	38,415	1,408	40,089	
2		Amritsar .. ..	843,367	701	14	74,006	48,615	122,621	8,759	32,756	24,350	4,338	28,935	
3		Gurdaspur .. ..	900,175	513	16	93,429	63,285	156,714	9,795	39,961	34,340	3,732	38,310	
4		Sialkot .. ..	863,578	615	20	31,984	23,014	54,998	2,750	34,081	26,808	4,835	31,722	
5		Gujranwala .. ..	649,286	319	18	70,983	31,400	102,383	5,688	20,068	15,081	2,905	18,062	
6		Sheikhupura .. ..	691,591	303	20	41,931	25,170	67,101	3,355	23,441	17,820	2,808	20,774	
			Total .. ..	4,807,106	..	102	366,248	223,483	589,731	5,782	191,460	156,814	20,026	177,892
(b) Municipal towns.														
1		LAHORE DIVISION.	Lahore .. ..	393,985	..	10	31,520	14,334	45,854	4,585	14,695	12,317	1,594	13,976
2			Chunian .. ..	8,269	..	1	1,003	373	1,376	1,376	459	374	36	423
3			Kasur .. ..	46,815	..	2	1,110	1,148	2,258	1,129	1,844	1,639	110	1,770
4			Khem Karan .. ..	6,898	..	1	509	361	870	870	343	317	12	331
5			Patti .. ..	12,882	..	1	152	127	279	279	262	235	22	260
6			Baghbanpura .. ..	13,805	..	1	794	374	1,168	1,168	410	334	36	375
7			Amritsar .. ..	262,995	..	5	30,740	20,388	51,128	10,226	15,855	8,416	3,698	15,669
8			Jandiala .. ..	8,888	..	1	297	211	508	508	310	228	4	232
9			Gurdaspur .. ..	12,094	..	1	1,063	682	1,745	1,745	543	466	76	485
10			Dinanagar .. ..	5,114	..	..	432	105	537	..	193	170	10	180
11			Pathankot .. ..	9,763	..	..	1,828	1,272	3,100	..	458	422	29	452
12			Dalhousie .. ..	1,030	..	..	54	29	83	..	59	41	15	58
13			Batala .. ..	33,204	..	1	3,225	2,456	5,681	5,681	1,717	1,582	52	1,641
14	Dera Nanak .. ..		5,176	..	..	563	248	811	..	213	174	27	201	
15	Sialkot .. ..		82,923	..	4	6,299	3,782	10,081	2,520	3,706	3,502	198	3,706	
16	Pasrur .. ..		7,905	..	1	186	159	345	345	345	261	21	283	
17	Narowal .. ..		7,095	..	1	262	270	532	532	300	250	38	288	
18	Gujranwala .. ..		58,716	..	1	3,678	2,748	6,426	6,426	2,629	2,231	324	2,555	
19	Wazirabad .. ..		20,707	..	1	541	497	1,038	1,038	505	416	84	500	
20	Eminabad .. ..		7,329	..	1	359	143	502	502	210	178	19	199	
21	Sharakpur .. ..		5,056	..	1	963	805	1,768	1,768	250	210	27	239	
		Total of Municipal towns ..	1,010,649	..	34	85,578	50,512	136,090	4,003	45,306	33,703	6,432	43,823	
		Total of Lahore Division ..	5,817,755	..	136	451,826	273,995	725,821	5,337	236,766	190,517	26,458	221,715	
(a) Districts excluding Municipal towns.														
1	RAWALPINDI DIVISION.	Gujrat .. ..	869,092	410	15	42,024	21,787	63,811	4,254	35,453	27,617	4,137	31,968	
2		Shahpur .. ..	746,509	172	22	37,077	21,201	58,278	2,649	24,207	16,770	3,969	20,903	
3		Jhelum .. ..	507,476	194	9	58,301	29,487	87,788	9,754	23,330	16,445	3,717	20,974	
4		Rawalpindi .. ..	512,403	306	13	44,121	22,057	66,178	5,091	17,458	13,646	2,974	16,727	
5		Attock .. ..	550,438	141	11	60,380	25,596	85,976	7,816	18,253	14,204	2,909	17,305	
6		Mianwali .. ..	373,224	76	6	24,907	13,601	38,508	6,418	12,911	11,674	651	12,389	
		Total .. ..	3,559,142	..	76	266,810	133,729	400,539	5,270	131,612	100,356	18,357	120,266	
(b) Municipal towns.														
1	RAWALPINDI DIVISION.	Gujrat .. ..	26,511	..	1	838	535	1,373	1,373	1,039	835	104	948	
2		Jalalpur .. ..	12,507	..	..	319	502	821	..	496	375	36	413	
3		Kunjah .. ..	7,152	..	..	306	236	542	..	399	327	37	364	
4		Dinga .. ..	7,068	..	..	101	96	197	..	191	164	20	185	
5		Sahiwal .. ..	7,762	..	1	292	150	442	442	234	165	58	229	
6		Bhera .. ..	19,741	..	1	585	277	862	862	594	564	30	594	
7		Miani .. ..	6,472	..	1	119	129	248	248	239	187	35	222	
8		Khuahab .. ..	14,194	..	1	321	210	531	531	403	352	38	371	
9		Sargodha .. ..	26,761	..	1	1,006	532	1,538	1,538	984	861	102	968	
10		Jhelum .. ..	17,266	..	1	1,009	543	1,552	1,552	684	546	89	675	
11		Pind Dadan Khan .. ..	9,832	..	1	798	356	1,154	1,154	414	241	105	399	
12		Rawalpindi .. ..	71,992	..	2	2,229	1,782	4,011	2,006	2,661	2,426	188	2,634	
13		Murree .. ..	1,530	..	1	944	247	1,191	1,191	108	70	18	101	
14		Pindigheb .. ..	10,506	..	..	705	700	1,405	..	200	124	71	198	
15		Hazro .. ..	9,155	..	..	427	273	700	..	402	341	55	399	
16		Campbellpur .. ..	7,997	..	1	1,300	804	2,104	2,104	430	325	71	403	
17		Mianwali .. ..	15,412	..	1	1,553	716	2,269	2,269	670	512	127	645	
18		Bhakkar .. ..	6,857	..	1	1,462	899	2,361	2,361	303	192	105	303	
19		Isa Khel .. ..	7,515	..	1	1,363	899	2,262	2,262	346	198	117	338	
20		Kalabagh .. ..	8,353	..	1	634	171	805	805	268	161	54	215	
		Total .. ..	294,583	..	16	16,311	10,057	26,368	1,648	11,065	8,946	1,460	10,604	
		Total of Rawalpindi Divi- sion.	3,853,725	..	92	283,121	143,786	426,907	4,640	142,677	109,302	19,817	130,870	



## DEPARTMENT.

IN THE PUNJAB PROVINCE DURING THE YEAR 1933-34.

Unknown.	RE-VACCINATION.			PERCENTAGE OF SUCCESSFUL CASES IN WHICH THE RESULTS WERE KNOWN.		Persons successfully vaccinated per 1,000 of population.	PERCENTAGE OF UNKNOWN CASES TO TOTAL CASES.		AVERAGE ANNUAL NUMBER OF PERSONS SUCCESSFULLY VACCINATED DURING PREVIOUS FIVE YEARS.		AVERAGE ANNUAL NUMBER OF DEATHS FROM SMALL-POX DURING PREVIOUS FIVE YEARS.		Number.
	Total.	Successful.	Unknown.	Primary.	Re-vaccination.		Primary.	Re-vaccination.	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.	
15	16	17	18	19	20	21	22	23	24	25	26	27	28
504	44,761	20,967	12,151	98.62	64.30	71.07	1.22	27.15	40,628	47.29	490	0.57	1
3,433	89,865	43,662	26,839	98.68	69.28	86.08	10.48	29.87	49,542	58.74	183	0.22	2
1,343	116,753	62,134	24,781	99.20	67.56	111.58	3.36	21.23	56,236	62.47	19	0.02	3
1,912	20,988	11,803	3,434	98.61	67.24	50.40	5.61	16.36	40,428	46.81	406	0.47	4
1,445	82,496	43,253	17,749	96.99	66.80	94.43	7.20	21.51	33,565	51.70	258	0.40	5
2,285	43,660	19,053	10,731	98.19	57.86	57.59	9.75	24.58	33,970	49.12	258	0.37	6
10,922	398,523	200,872	95,685	98.53	60.33	78.79	5.70	24.01	254,369	52.92	1,614	0.34	
483	31,159	17,150	5,055	98.34	65.70	79.00	3.29	16.22	40,102	101.79	374	0.95	1
12	917	434	176	94.63	58.57	103.64	2.61	19.19	348	42.08	5	0.60	2
31	414	139	7	97.63	34.15	40.78	1.68	1.69	1,795	38.34	7	0.15	3
4	527	267	126	97.64	66.58	86.69	1.17	23.91	245	35.52	7	1.01	4
2	17	9	4	100.00	69.23	20.88	0.76	23.53	622	48.28	6	0.47	5
19	758	387	103	95.91	59.08	55.20	4.63	13.59	602	43.61	7	0.51	6
140	35,273	25,554	3,116	99.71	79.47	156.74	0.88	8.83	30,697	116.72	78	0.30	7
76	198	168	30	99.15	100.00	45.00	24.52	15.15	1,081	121.62	8	0.90	8
35	1,202	883	136	95.47	82.83	113.11	6.45	11.31	867	71.60	2	0.17	9
13	344	207	44	100.00	69.00	75.67	6.74	12.79	304	59.44	1	0.20	10
5	2,642	1,048	627	99.78	52.01	153.64	1.09	23.73	566	57.97	4	0.41	11
..	24	18	..	98.31	75.00	73.79	..	..	173	167.96	..	..	12
61	3,964	1,653	390	99.09	46.25	99.20	3.55	9.84	2,062	62.10	7	0.21	13
6	598	274	84	97.10	53.31	91.77	2.82	14.05	520	100.46	5	0.97	14
..	6,375	6,162	144	100.00	98.89	119.00	..	2.26	8,411	101.43	27	0.33	15
52	..	..	..	96.59	..	35.80	15.07	..	660	83.49	2	0.25	16
7	232	120	26	98.29	58.25	57.51	2.33	11.21	536	75.55	4	0.56	17
70	3,797	1,704	406	99.84	50.25	72.64	2.66	10.60	4,493	76.52	21	0.36	18
5	533	312	90	100.00	70.43	39.21	0.99	16.89	1,115	53.85	11	0.53	19
..	292	168	6	94.76	58.74	50.08	..	2.05	325	44.34	2	0.27	20
11	1,518	1,016	179	100.00	75.88	248.22	4.40	11.79	251	49.64	3	0.59	21
1,032	90,784	57,673	10,749	98.98	72.06	100.43	2.28	11.84	95,775	94.76	581	0.57	
11,954	489,307	258,545	106,434	98.62	67.53	82.55	5.05	21.75	350,144	60.19	2,195	0.38	
2,873	28,370	13,897	5,143	98.12	59.83	52.77	8.10	18.13	38,435	44.22	495	0.57	1
2,718	34,071	10,520	8,533	97.27	41.19	42.09	11.23	25.04	32,127	43.04	389	0.52	2
1,835	64,458	38,325	11,872	97.58	72.88	116.85	7.87	18.42	32,965	64.96	163	0.32	3
694	48,720	25,324	6,479	99.78	59.95	82.07	3.98	13.30	36,491	71.22	67	0.13	4
619	67,723	49,063	7,310	98.13	81.21	120.57	3.39	10.79	35,753	64.95	88	0.16	5
351	25,629	19,653	1,921	98.64	82.90	85.85	2.72	7.50	23,576	63.17	14	0.04	6
9,090	268,971	156,782	41,258	98.16	68.85	77.84	6.91	15.34	199,347	56.01	1,216	0.34	
58	334	162	67	96.64	60.67	41.87	5.58	20.06	1,365	51.49	5	0.19	1
59	325	223	70	94.51	87.45	50.85	11.90	21.54	422	33.74	9	0.72	2
31	143	60	44	98.91	60.61	59.28	7.77	30.77	443	61.94	5	0.70	3
..	6	2	..	96.86	33.33	26.46	..	..	343	48.53	1	0.14	4
1	208	110	5	98.28	54.19	43.67	0.43	2.40	429	55.27	8	1.03	5
..	268	97	35	100.00	41.63	35.00	..	13.06	1,973	99.94	32	1.62	6
13	9	2	3	98.23	33.33	34.61	5.44	33.33	420	64.89	14	2.16	7
28	128	19	29	98.93	19.19	27.48	6.95	22.66	558	39.31	19	1.34	8
13	554	288	71	99.69	59.63	46.93	1.32	12.82	2,527	94.43	14	0.52	9
4	868	654	35	99.26	78.51	76.97	0.58	4.03	1,873	108.48	6	0.35	10
13	740	380	166	99.50	66.20	79.23	3.14	22.43	690	70.18	3	0.31	11
17	1,350	706	239	99.62	63.55	46.39	0.64	17.70	7,530	104.59	17	0.24	12
3	1,083	962	43	96.19	92.50	694.77	2.78	3.97	253	165.36	..	..	13
..	1,205	716	184	99.00	70.13	87.00	..	15.27	1,208	114.98	..	..	14
3	298	160	107	100.00	83.77	61.06	0.75	35.91	620	67.72	7	0.76	15
20	1,674	1,230	304	98.29	89.78	204.20	4.65	18.16	850	106.29	1	0.13	16
12	1,599	1,064	168	98.02	74.35	110.89	1.79	10.51	1,344	87.20	1	0.06	17
..	2,058	1,455	277	100.00	81.70	256.38	..	13.46	311	45.36	3	0.44	18
7	1,916	1,380	189	99.71	79.91	228.61	2.02	9.86	169	22.49	..	..	19
51	537	366	98	99.08	83.37	69.56	19.03	18.25	179	21.43	8	0.96	20
333	15,303	10,036	2,134	98.81	76.21	70.07	3.01	13.94	23,507	79.79	153	0.52	
9,423	284,274	166,818	43,392	98.21	69.25	77.25	6.60	15.26	222,854	57.83	1,369	0.36	



## STATEMENT No. I.—SHOWING PARTICULARS OF VACCINATION

Number.	Division.	(a) Districts excluding Municipal towns. (b) Municipal towns.	Population of districts (exclud- ing municipal towns) and municipal towns according to Census of 1931.	Average population of districts per square mile.	Average number of vaccinators employed throughout the year.	TOTAL NUMBER OF PER- SONS VACCINATED.			Average number of persons vacci- nated by each vaccinator.	PRIMARY VACCINATION.				
						Males.	Females.	Total.		Total.	Successful.			
											Under one year.	One year and under six years.	Total of all ages.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
(a) Districts excluding Municipal towns.														
1	MULTAN DIVISION.	Montgomery .. ..	962,114	221	24	118,067	75,138	193,205	8,050	40,714	27,117	4,951	34,571	
2		Lyallpur .. ..	1,085,346	357	22	60,527	37,698	98,225	4,465	43,467	33,505	4,797	38,955	
3		Jhang .. ..	602,857	193	13	88,113	68,855	156,968	12,074	24,189	17,810	3,513	22,072	
4		Multan .. ..	1,048,732	199	23	73,656	48,337	121,993	5,304	40,594	25,535	6,640	35,593	
5		Muzaffargarh ..	565,375	98	10	90,242	75,595	165,837	16,584	27,600	20,099	4,264	26,243	
6		Dera Ghazi Khan ..	444,758	92	11	68,289	44,649	112,938	10,267	28,901	17,932	5,790	26,432	
		Total .. ..	4,709,182	..	103	498,894	350,272	849,166	8,244	205,465	141,998	29,955	183,866	
(b) Municipal towns.														
1		Montgomery .. ..	26,164	..	2	1,419	749	2,168	1,084	699	471	156	670	
2		Pakpattan .. ..	11,311	..	..	757	515	1,272	..	338	282	19	307	
3		Lyallpur .. ..	42,922	..	2	3,115	3,131	6,246	3,123	1,227	906	264	1,187	
4		Gujra .. ..	9,779	..	1	2,714	2,160	4,874	4,874	813	421	152	701	
5		Kamalia .. ..	13,220	..	1	857	347	1,204	1,204	479	400	64	469	
6		Jhang Maghiana ..	36,035	..	1	5,421	3,086	8,507	8,507	1,417	1,049	211	1,275	
7	Chiniot .. ..	25,841	..	1	931	646	1,577	1,577	856	543	145	692		
8	Multan .. ..	107,366	..	3	2,696	2,205	4,901	1,634	3,685	3,277	239	3,542		
9	Shujabad .. ..	6,618	..	1	330	142	472	472	142	120	15	137		
10	Muzaffargarh ..	6,110	..	..	770	305	1,075	..	175	114	46	164		
11	Khengarh .. ..	2,863	..	..	113	41	154	..	110	84	6	108		
12	Alipur .. ..	3,931	..	..	580	323	903	..	151	124	24	151		
13	Leiah .. ..	9,578	..	..	1,028	483	1,511	..	379	284	94	379		
14	Karor .. ..	3,491	..	..	384	186	570	..	95	86	9	95		
15	Dera Ghazi Khan ..	23,468	..	1	1,176	666	1,842	1,842	1,032	910	100	1,010		
16	Jampur .. ..	9,430	..	..	684	351	1,035	..	438	339	66	432		
17	Dajal .. ..	6,186	..	1	1,813	623	2,436	8,698	{	278	216	21	245	
18	Rajanpur .. ..	4,510	..		1,782	818	2,600			230	174	34	230	
19	Kot Mithan .. ..	2,680	..		1,700	927	2,627			257	133	39	248	
	Total of Municipal towns ..	351,503	..	14	28,270	17,704	45,974	3,284	12,801	9,933	1,704	12,042		
	Total of Multan division ..	5,060,685	..	117	527,164	367,976	895,140	7,651	218,266	151,931	31,659	195,908		
	Total of districts and Muni- cipal staff.	23,304,597	243	528	1,948,775	1,174,064	3,122,839	5,914	924,423	701,372	120,900	848,583		
	Total of Special staff ..	..	..	12	34,985	27,812	62,797	5,233	20,495	7,375	8,734	17,677		
	Total of Cantonment staff	149,755	..	5	12,120	4,138	16,258	3,252	4,823	3,514	856	4,504		
	Total of Dispensary staff ..	..	..	..	1,979	806	2,785	..	644	508	81	615		
	GRAND TOTAL ..	23,454,352	243	545	1,997,859	1,206,820	3,204,679	5,880	(a) 950,385	712,769	130,571	(c) 871,379		

(a) Difference between number of operations and number of persons  
 (b) Difference between number of operations and number of persons  
 (c) The figures include 28,039 Primary successful vaccination of persons

## SUMM

	TOTAL NUMBER OF PERSONS VACCINATED.		TOTAL NUMBER OF OPERATIONS PERFORMED.		PERCENTAGE OF SUCCESSFUL CASES IN WHICH THE RESULTS WERE KNOWN.	
	Primary.	Re-vaccinations.	Primary.	Re-vaccinations.	Primary.	Re-vaccinations.
By District, Cantonment and Special Staff (Statement No. I).	948,067	2,253,827	949,741	2,253,830	98.14	69.29
By Dispensary Staff .. ..	644	2,141	644	2,141	96.55	84.47
By other agencies, if any ..	..	..	..	..	..	..
Total ..	948,711	2,255,968	950,385	2,255,971	98.14	69.30



## DEPARTMENT.

IN THE PUNJAB PROVINCE DURING THE YEAR 1933-34.

RE-VACCINATION.				PERCENTAGE OF SUCCESSFUL CASES IN WHICH THE RESULTS WERE KNOWN.		Persons successfully vaccinated per 1,000 of population.	PERCENTAGE OF UNKNOWN CASES TO TOTAL CASES.		AVERAGE ANNUAL NUMBER OF PERSONS SUCCESSFULLY VACCINATED DURING PREVIOUS FIVE YEARS.		AVERAGE ANNUAL NUMBER OF DEATHS FROM SMALL-POX DURING PREVIOUS FIVE YEARS.		Number.
Unknown.	Total.	Successful.	Unknown.	Primary.	Re-vaccination.		Primary.	Re-vaccination.	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.	
15	16	17	18	19	20	21	22	23	24	25	26	27	28
4,924	152,491	76,894	32,544	96.59	64.10	115.85	12.09	21.34	55,012	57.18	289	0.30	1
3,707	54,758	28,779	11,540	97.98	66.59	62.41	8.53	21.07	62,847	57.91	243	0.22	2
1,888	132,782	93,384	23,721	98.97	85.63	191.51	7.81	17.86	43,636	72.38	63	0.10	3
4,620	81,399	41,529	19,025	98.94	66.58	73.54	11.38	23.37	51,589	49.19	153	0.15	4
1,353	138,766	95,935	17,414	99.98	79.06	216.10	4.90	12.55	62,228	110.07	17	0.03	5
2,319	84,176	45,265	14,794	99.44	65.24	161.20	8.02	17.58	68,940	155.01	35	0.12	6
18,811	644,372	381,786	119,038	98.51	72.67	120.12	9.16	18.47	344,252	73.10	820	0.17	
20	1,469	629	385	98.67	58.03	49.65	2.86	26.21	2,379	90.93	10	0.38	1
18	934	648	89	95.94	76.69	84.43	5.33	9.53	644	56.94	2	0.18	2
31	5,019	3,927	170	99.25	80.99	119.15	2.53	3.39	6,085	141.77	29	0.68	3
103	4,061	2,628	735	98.73	79.01	340.42	12.67	18.10	666	68.11	2	0.20	4
3	725	327	90	98.53	51.50	60.21	0.63	12.41	571	43.19	5	0.38	5
137	7,090	3,598	1,634	99.61	65.95	135.23	9.67	23.05	2,237	62.08	8	0.22	6
110	721	305	166	92.76	54.95	38.58	12.85	23.02	874	33.82	8	0.31	7
120	1,216	924	128	99.35	84.93	41.60	3.26	10.53	6,700	62.40	25	0.23	8
..	330	318	..	96.48	96.36	68.75	..	..	347	52.43	1	0.15	9
11	900	667	46	100.00	78.10	136.01	6.29	5.11	380	62.49	1	0.16	10
2	44	31	4	100.00	77.50	48.55	1.82	9.09	109	38.07	..	..	11
..	752	487	135	100.00	78.93	162.30	..	17.95	213	54.18	..	..	12
..	1,132	1,029	..	100.00	90.90	147.00	..	..	1,004	104.82	2	0.21	13
..	475	367	..	100.00	77.26	132.34	..	..	222	63.59	..	..	14
10	817	484	76	98.83	65.32	63.66	0.97	9.30	1,924	81.98	3	0.13	15
3	600	422	53	99.31	77.15	90.56	0.68	8.83	1,367	144.96	..	..	16
27	2,164	1,209	345	97.61	66.47	235.05	9.71	15.94	1,937	313.13	5	0.81	17
..	2,370	1,781	150	100.00	80.23	445.90	..	6.33	803	178.05	2	0.44	18
5	2,370	1,739	205	98.41	80.32	741.42	1.95	8.65	778	290.30	1	0.37	19
600	33,189	21,520	4,411	98.70	74.78	95.48	4.69	13.29	29,240	83.19	104	0.30	
19,411	677,561	403,306	123,449	98.52	72.78	118.41	8.89	18.22	373,492	73.80	924	0.18	
59,825	2,190,980	1,229,482	431,307	98.15	69.51	89.17	6.47	19.61	1,385,291	59.44	6,736	0.29	
2,330	42,415	19,464	6,760	97.31	54.59	..	11.37	15.94	52,460	..	..	..	
285	11,435	8,367	1,109	99.25	81.03	85.95	5.91	9.70	14,024	93.65	9	0.06	
7	2,141	1,626	216	96.55	84.47	..	1.09	10.09	3,793	..	..	..	
62,447	(b) 2,255,971	1,258,939	439,392	98.14	69.30	90.83	6.57	19.48	1,455,568	62.06	6,745	0.29	

vaccinated equals 1,674 which represents secondary operations.  
 re-vaccinated equals 3 which represents secondary operations.  
 or six years and over six years of age.

## ARY.

AVERAGE NUMBER OF PERSONS VACCINATED BY EACH VACCINATOR.		NUMBER OF CHILDREN SUCCESSFULLY VACCINATED.		Ratio of successful vaccinations per 1,000 of population.	Total cost of Department.	Average cost of each successful case.	REMARKS.
Vaccinators employed.	Persons vaccinated by each vaccinator.	Under one year.	One year and under six years.				
545	5,875	712,261	130,490	90.73	Rs. A. P. 3,79,816 4 3	Rs. A. P. 0 2 10	
..	..	508	81	..	..	..	
..	..	..	..	..	..	..	
545	5,880	712,769	130,571	90.83	3,79,816 4 3	0 2 10	



## APPENDIX I TO STATEMENT No. 1.

STATEMENT SHOWING THE DETAILS OF THE VACCINATION OPERATIONS PERFORMED BY THE SPECIAL AND CANTONMENT STAFFS ACCORDING TO LOCALITIES DURING THE YEAR 1933-34.

1	2	3	4	5	6						7			8		9		10	
Number.	Districts.	Name of localities.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated.	PRIMARY VACCINATION.						RE-VACCINATION.			PERCENTAGE OF SUCCESSFUL CASES IN WHICH RESULTS WERE KNOWN.		PERCENTAGE OF UNKNOWN CASES TO TOTAL CASES.		Number.	
					Total.	Successful.					Unknown.	Total.	Successful.	Unknown.	Primary.	Revaccination.	Primary.		Revaccination.
						Under one year.	One year and under six years.	Six years and over six years.	Total of all ages.										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
THE VACCINATIONS PERFORMED BY THE SPECIAL STAFF ARE INCLUDED IN STATEMENT NO. I.																			
1	Kangra	Suket State .. ..	..	4,334	2,481	1,268	1,096	23	2,387	82	1,853	302	146	..	..	..	..	1	
2		Mandi State .. ..	..	4,024	993	385	478	11	874	113	3,031	1,379	633	..	..	..	..	2	
3	Ambala	Sirmoor State .. ..	..	2,798	664	409	212	16	637	25	2,134	1,247	246	..	..	..	..	3	
4		Kalsia State .. ..	..	2,030	2,045	1,654	158	3	1,815	178	14	5	6	..	..	..	..	4	
5		Ghund State .. ..	..	561	57	..	11	42	53	3	504	275	28	..	..	..	..	5	
6		Baghal State .. ..	..	1,530	1,433	349	536	8	893	216	181	70	42	..	..	..	..	6	
7		Dhadi State .. ..	..	43	19	1	9	4	14	5	24	5	5	..	..	..	..	7	
8		Tharoch .. ..	..	364	283	4	167	79	250	33	81	29	13	..	..	..	..	8	
9		Dhami State .. ..	..	246	241	71	145	1	217	21	5	..	5	..	..	..	..	9	
10		Kuthar State .. ..	..	2,225	210	76	120	1	197	5	2,015	575	346	..	..	..	..	10	
11		Kumharsain State ..	..	390	355	47	257	8	312	35	35	16	10	..	..	..	..	11	
12		Delath State .. ..	..	203	163	5	105	36	146	14	40	14	11	..	..	..	..	12	
13		Mehlog State .. ..	..	523	358	179	176	..	355	3	165	36	12	..	..	..	..	13	
14		Beja State .. ..	..	57	57	17	39	..	56	1	..	..	..	..	..	..	..	14	
15	Simla	Shangri State .. ..	..	223	223	12	183	22	217	6	..	..	..	..	..	..	..	15	
16		Ratesh State .. ..	..	95	71	..	24	20	44	27	24	4	8	..	..	..	..	16	
17		Madhan State .. ..	..	425	197	..	9	74	83	114	228	39	178	..	..	..	..	17	
18		Mangal State .. ..	..	71	56	6	39	5	50	6	15	8	..	..	..	..	..	18	
19		Rawinguh State ..	..	225	92	1	37	54	92	..	133	39	65	..	..	..	..	19	
20		Khaneti State .. ..	..	255	141	12	97	10	119	22	114	32	8	..	..	..	..	20	
21		Theog State .. ..	..	478	117	13	32	52	97	11	361	225	39	..	..	..	..	21	
22		Koti Kiar State ..	..	2,287	431	9	183	183	375	50	1,856	602	909	..	..	..	..	22	
23		Bilaspur State .. ..	..	31,910	5,260	1,163	3,579	114	4,856	356	26,650	13,420	3,177	..	..	..	..	23	
24		Tahsil Kot Khai (Baga Kotgarh) ..	..	313	56	10	16	28	54	2	257	198	10	..	..	..	..	24	
25		Tahsil Kot Khai ..	..	238	32	..	4	6	10	2	226	14	20	..	..	..	..	25	
26		Tahsil Simla (Baga Bahrauli) ..	..	224	119	101	17	1	119	..	105	68	7	..	..	..	..	26	
27	Dera Ghazi Khan, Rawalpindi ..	Tribal area .. ..	..	3,910	2,873	1,991	936	766	2,793	80	1,037	734	106	..	..	..	..	27	
28		Murree Cantonment ..	..	249	35	21	13	..	34	1	214	38	15	..	..	..	..	28	
29	Mianwali ..	Mianwali District ..	..	2,566	1,453	471	56	1	528	919	1,113	90	706	..	..	..	..	29	
					(a)														
Total ..			12	62,797	20,495	7,375	8,734	1,568	17,677	2,330	42,415	19,464	6,760	97.31	54.59	11.37	15.94		

NOTE.—(a) Difference between number of operations and number of persons vaccinated equals 115 which represents secondary operations.

THE VACCINATIONS IN CANTONMENTS WHICH ENTERTAIN THEIR OWN VACCINATORS ARE SHOWN SEPARATELY IN STATEMENT NO. I.

1	Ambala ..	Ambala ..	1	1,815	1,564	1,446	96	7	1,549	..	251	140	31	..	..	..	..	1
2	Jullundur ..	Jullundur* ..	..	358	222	135	66	1	292	19	136	78	42	..	..	..	..	2
3	Ferozepore ..	Ferozepore ..	1	2,839	467	365	99	3	467	..	2,372	1,790	472	..	..	..	..	3
4	Lahore ..	Lahore ..	1	1,207	810	459	171	1	631	179	397	72	171	..	..	..	..	4
5	Sialkot ..	Sialkot* ..	..	1,170	380	250	100	26	376	4	790	601	86	..	..	..	..	5
6	Jhelum ..	Jhelum* ..	..	128	16	14	1	..	15	..	112	50	..	..	..	..	..	6
7	Rawalpindi ..	Rawalpindi ..	1	8,148	1,158	782	232	31	1,065	80	6,990	5,331	285	..	..	..	..	7
8	Multan ..	Multan ..	1	85	42	25	16	1	42	..	43	34	2	..	..	..	..	8
9	Ambala ..	Kasauli* ..	..	59	18	7	8	1	16	..	41	20	..	..	..	..	..	9
10	Simla	Sabathu* ..	..	316	131	31	37	63	131	..	185	185	..	..	..	..	..	10
11		Dagshai* ..	..	90	15	..	10	..	10	3	75	40	20	..	..	..	..	11
12		Solan* ..	..	43	..	..	..	..	..	..	43	26	..	..	..	..	..	12
		Total ..	..	5	16,258	4,823	3,514	856	134	4,504	285	11,435	8,367	1,109	99.25	81.03	5.91	9.70

\*Performed by Medical Staff.



## Appendix II to Annual Vaccination Statement No. I for the year 1933-34.

Number.	Districts.	Population according to census of 1931.	Primary.	Re-vaccination.	Total.	Secondary operations.
1	Montgomery ..	999,589	41,751	154,894	196,645	..
2	Gurgaon ..	739,900	29,472	150,011	179,483	..
3	Amritsar ..	1,116,209	48,921	125,336	174,257	..
4	Muzaffargarh ..	591,348	28,510	142,069	170,050	529
5	Gurdaspur ..	968,253	43,144	125,527	168,671	..
6	Jhang ..	664,733	26,462	140,593	167,052	3
7	Ferozepore ..	1,144,719	44,264	109,892	154,156	..
8	Lahore ..	1,361,378	59,166	78,553	137,719	..
9	Kangra ..	799,134	24,182	110,139	134,321	..
10	Ludhiana ..	672,476	25,004	106,881	131,885	..
11	Multan ..	1,170,506	44,421	82,945	127,366	..
12	Dera Ghazi Khan ..	491,032	31,136	92,497	123,478	155
13	Lyallpur ..	1,151,267	45,986	64,563	110,549	..
14	Gujranwala ..	736,038	23,412	87,118	110,349	181
15	Ambala ..	731,526	27,215	64,690	91,905	..
16	Jhelum ..	537,007	24,428	66,066	90,494	..
17	Attock ..	580,175	19,285	70,900	90,185	..
18	Karnal ..	852,570	34,943	54,235	89,171	7
19	Rohtak ..	805,571	32,545	42,792	75,175	162
20	Hoshiarpur ..	1,032,181	34,906	37,111	72,017	..
21	Jullundur ..	937,725	36,087	35,543	71,544	86
22	Rawalpindi ..	619,960	20,227	51,153	71,380	..
23	Sheikhupura ..	696,647	23,691	45,178	68,869	..
24	Hissar ..	899,391	37,655	30,078	67,407	326
25	Gujrat ..	922,330	37,578	29,178	66,744	12
26	Sialkot ..	970,306	38,432	27,595	65,956	71
27	Shahpur ..	821,439	26,061	35,238	61,899	..
28	Mianwali ..	411,361	14,498	31,739	46,205	32
29	Simla ..	35,496	441	7,466	7,907	..
	Total ..	23,460,267	924,423	2,199,980	3,122,839	1,564



## STATEMENT No. II.—SHOWING THE COST OF THE DEPARTMENT

1	2	3	4	5	6	7	8	9	10	11	12
Number.	Districts.	Super- vising Officers.	EXPENDITURE.								
			Pay.	Super- intendents of Vaccination.	Pay.	Vaccina- tors.	Pay.	Peons, etc.	Pay.	Total pay of establishment.	Travelling allowances.
1	2	3	4	5	6	7	8	9	10	11	12
			Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.	Rs. A. P.	Rs. A. P.
1	Hissar .. ..	.. ..	.. ..	1	595 8 0	20	6,610 9 0	3	272 10 0	7,478 11 0	1,048 3 0
2	Rohtak .. ..	.. ..	.. ..	1	689 12 0	16	4,928 3 4	(e) 1	6 15 0	5,624 14 4	155 7 0
3	Gurgaon .. ..	.. ..	.. ..	1	772 13 0	18	5,408 4 0	1	189 0 0	6,361 1 0	222 7 0
4	Karnal .. ..	.. ..	.. ..	1	1,058 10 0	19	6,162 6 0	3	130 12 0	7,351 12 0	361 12 0
5	Ambala .. ..	.. ..	.. ..	1	513 0 0	23	5,507 9 0	5	559 0 0	6,579 9 0	575 3 0
6	Simla .. ..	.. ..	.. ..	1	580 0 0	2	493 0 0	1	230 2 0	1,303 2 0	..
7	Kangra .. ..	.. ..	.. ..	1	940 7 0	14	5,204 2 0	..	..	6,144 9 0	379 10 0
8	Hoshiarpur ..	.. ..	.. ..	1	684 0 0	14	4,237 0 0	..	..	4,921 0 0	1,160 0 0
9	Jullundur ..	.. ..	.. ..	2	621 15 0	19	5,970 12 0	2	147 9 3	6,740 4 3	478 13 0
10	Ludhiana ..	.. ..	.. ..	2	1,048 2 0	15	4,664 9 10	4	270 9 3	5,983 5 1	225 10 0
11	Ferozepore ..	.. ..	.. ..	1	516 0 0	28	9,858 3 9	4	290 0 0	10,664 3 9	711 12 0
12	Lahore .. ..	.. ..	.. ..	2	1,546 1 0	31	8,295 8 0	2	480 0 0	10,321 9 0	1,998 10 6
13	Amritsar ..	.. ..	.. ..	4	2,665 9 0	20	6,308 9 0	7	1,530 0 0	10,504 2 0	1,682 15 0
14	Gurdaspur ..	.. ..	.. ..	1	1,081 9 0	18	5,534 4 0	2	219 1 0	6,834 14 0	321 10 0
15	Sialkot .. ..	.. ..	.. ..	3	1,610 9 0	26	5,566 2 9	3	461 0 0	7,637 11 9	460 10 0
16	Gujranwala ..	.. ..	.. ..	2	1,401 4 0	21	6,056 5 3	3	390 0 0	7,847 9 3	180 0 0
17	Sheikhpura ..	.. ..	.. ..	1	576 12 0	21	5,578 0 0	..	..	6,154 12 0	355 10 0
18	Gujrat .. ..	.. ..	.. ..	1	561 0 0	16	6,370 3 0	1	90 0 0	7,021 3 0	453 6 0
19	Shahpur .. ..	.. ..	.. ..	1	1,346 9 0	27	6,100 7 0	1	66 12 0	7,513 12 0	538 4 0
20	Jhelum .. ..	.. ..	.. ..	2	1,064 0 0	11	3,351 0 0	1	70 8 0	4,485 8 0	368 7 0
21	Rawalpindi ..	.. ..	.. ..	1	760 0 0	17	6,542 0 0	3	525 0 0	7,827 0 0	554 3 0
22	Attock .. ..	.. ..	.. ..	2	1,122 1 0	12	3,857 15 0	..	..	4,980 0 0	1,177 0 0
23	Mianwali ..	.. ..	.. ..	1	1,005 6 0	10	2,510 7 0	..	..	3,515 13 0	378 2 4
24	Montgomery ..	.. ..	.. ..	5	2,820 0 0	26	8,548 9 0	2	236 0 0	11,604 9 0	653 6 0
25	Lyalpur .. ..	.. ..	.. ..	1	769 8 0	26	8,845 14 0	4	474 3 0	10,089 9 0	1,078 11 0
26	Jhang .. ..	.. ..	.. ..	1	541 0 0	15	3,482 0 0	2	81 0 0	4,104 0 0	228 0 0
27	Multan .. ..	.. ..	.. ..	2	1,220 7 0	28	7,379 15 0	8	580 12 0	9,181 2 0	366 5 0
28	Muzaffargarh ..	.. ..	.. ..	1	854 4 0	19	3,236 7 0	..	..	4,090 11 0	318 14 0
29	Dera Ghazi Khan	.. ..	.. ..	1	864 0 0	13	4,345 2 0	1	60 0 0	5,269 2 0	300 0 0
	Total .. ..	.. ..	.. ..	45	29,830 2 0	533	1,60,953 6 11	64	7,351 13 6	1,98,135 6 5	16,730 14 10
	Special Staff, Punjab	(a) 1	13,881 0 0	2	1,739 8 0	15	4,936 2 0	2	354 0 0	(c) 9,074 9 0	639 8 0
	Vaccine Institute	(b) 1	13,193 8 0	..	..	(d) 8	3,824 15 0	3	767 10 0	(e) 9,305 4 0	1,726 7 0
	Total .. ..	2	27,074 8 0	2	1,739 8 0	23	8,761 1 0	5	1,121 10 0	18,379 13 0	2,365 15 0
	GRAND TOTAL ..	2	27,074 8 0	47	31,569 10 0	556	1,69,714 7 11	69	8,473 7 6	2,16,515 3 5	19,096 13 10

Average cost is calculated on the total number of successful

(a) Assistant Director of

(b) Superintendent, Punjab

(c) Including Rs. 6,757-10-0

(d) Including two laborers

(e) From 16th to 28th

(f) Paid from Red Cross

(g) Paid from Railway



DEPARTMENT.

THE PUNJAB PROVINCE DURING THE YEAR 1933-34.

PAID FROM								6	7	8
Contingencies.	Total cost.	Imperial Funds.	Provincial Funds.	Local Funds.	Municipal Funds.	Cantonment Funds.	Total.	Number of successful vaccinations and re-vaccinations.	Average cost of each successful case.	Number.
13	14	15	16	17	18	19	20	21	22	23
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.		Rs. A. P.	
3,429 2 9	11,956 0 9	..	..	10,094 10 9	1,891 6 0	..	11,956 0 9	46,851	0 4 1	1
4,206 9 9	9,986 15 1	..	..	8,382 7 7	1,604 7 6	..	9,986 15 1	51,281	0 3 1	2
3,503 0 0	10,086 8 0	..	..	8,633 14 0	1,452 10 0	..	10,086 8 0	145,202	0 1 1	3
2,322 4 11	10,035 12 11	..	..	8,425 6 6	1,610 6 5	..	10,035 12 11	66,297	0 2 5	4
2,472 14 6	9,627 10 6	..	..	7,598 1 9	1,454 3 9	665 5 0	9,627 10 6	56,249	0 2 9	5
488 10 0	1,791 12 0	..	..	..	1,791 12 0	..	1,791 12 0	784	2 4 7	6
4,829 6 9	11,353 9 9	..	..	10,878 7 0	475 2 9	..	11,353 9 9	71,223	0 2 3	7
3,411 0 0	9,492 0 0	..	..	9,005 0 0	487 0 0	..	9,492 0 0	50,205	0 3 0	8
2,208 15 9	9,428 1 0	..	..	6,958 2 0	2,457 15 0	12 0 0	9,428 1 0	51,332	0 2 11	9
3,429 0 0	9,637 15 1	..	..	7,399 3 0	2,337 12 1	..	9,637 15 1	55,963	0 2 9	10
6,703 0 7	18,079 0 4	..	..	14,550 9 7	3,078 6 9	450 0 0	18,079 0 4	110,170	0 2 8	11
4,120 11 9	16,440 15 3	..	..	7,363 2 3	8,558 11 0	519 2 0	16,440 15 3	97,280	0 2 8	12
5,637 2 0	17,824 3 0	..	147 1 0	11,811 8 0	5,865 10 0	..	17,824 3 0	114,220	0 2 6	13
6,114 14 2	13,271 6 2	..	323 0 0	11,598 7 2	1,205 4 0	(f) 144 11 0	13,271 6 2	107,544	0 2 0	14
2,672 5 0	10,770 10 9	..	159 13 0	7,954 6 6	2,517 7 3	139 0 0	10,770 10 9	55,961	0 3 1	15
3,831 0 9	11,858 10 0	..	..	9,975 10 0	1,883 0 0	..	11,858 10 0	66,753	0 2 10	16
1,974 8 0	8,484 14 0	..	..	7,581 12 0	903 2 0	..	8,484 14 0	41,982	0 3 4	17
1,819 7 4	9,294 0 4	..	..	8,696 0 4	598 0 0	..	9,294 0 4	48,222	0 3 1	18
4,737 1 5	12,789 1 5	..	..	10,235 11 8	2,553 5 9	..	12,789 1 5	34,323	0 5 11	19
2,079 7 5	6,933 6 5	..	8 0 0	6,351 8 5	571 14 0	..	6,933 6 5	61,472	0 1 10	20
3,162 0 0	11,543 3 0	..	..	8,939 3 0	1,515 0 0	1,099 0 0	11,543 3 0	52,850	0 3 6	21
2,759 11 0	8,916 11 0	..	..	8,429 0 0	487 11 0	..	8,916 11 0	69,474	0 2 1	22
1,252 2 9	5,116 2 1	..	119 5 0	4,271 6 4	745 6 9	(g) 12 0 0	5,116 2 1	37,808	0 2 2	23
5,993 8 5	18,251 7 5	..	..	16,319 15 8	1,931 7 9	..	18,251 7 5	113,719	0 2 7	24
3,952 6 0	15,118 10 0	..	..	11,196 6 0	3,922 4 0	..	15,118 10 0	76,973	0 3 2	25
3,702 0 0	8,034 0 0	..	..	7,130 0 0	904 0 0	..	8,034 0 0	121,326	0 1 1	26
4,353 6 9	13,900 13 9	..	75 13 0	11,492 6 9	2,057 7 0	275 3 0	13,900 13 9	82,119	0 2 8	27
2,823 6 0	7,232 15 0	..	..	7,020 15 0	212 0 0	..	7,232 15 0	125,656	0 0 11	28
3,588 11 3	9,157 13 3	..	..	7,875 6 3	1,282 7 0	..	9,157 13 3	79,197	0 1 10	29
1,01,577 15 0	3,16,444 4 3	..	833 0 0	2,55,919 11 6	56,375 3 9	3,316 5 0	3,16,444 4 3	2,090,936	0 2 5	
403 0 0	23,998 1 0	..	23,998 1 0	..	..	..	23,998 1 0	37,141	0 10 4	
15,148 12 0	39,373 15 0	..	39,373 15 0	..	..	..	39,373 15 0	..	..	
15,551 12 0	63,372 0 0	..	63,372 0 0	..	..	..	63,372 0 0	37,141	..	
1,17,129 11 0	3,79,816 4 3	..	64,205 0 0	2,55,919 11 6	56,375 3 9	3,316 5 0	3,79,816 4 3	2,128,977	0 2 10	

vaccinations and re-vaccinations performed by the District, Municipal, Special and Cantonment staffs,—vide Statement No. I.  
Public Health, Punjab (Technical) Vaccination,  
Vaccine Institute,  
on account of pay of 6 clerks,  
Jory Assistants and one Veterinary Assistant,  
February 1934.  
Funds.  
Funds.



COMPARATIVE STATEMENT No. III.—SHOWING THE NUMBER OF PERSONS PRIMARILY VACCINATED AND THE NUMBER OF THOSE PERSONS WHO WERE SUCCESSFULLY VACCINATED IN THE PUNJAB IN EACH OF THE UNDERMENTIONED OFFICIAL YEARS.

PERSONS PRIMARILY VACCINATED,

ESTABLISHMENT.	YEAR ENDING 31st MARCH.																							
	1907—1923.		1924.	1925.	1926.	1927.	1928.	1929.	1930.	1931.	1932.	1933.	1934.											
	Average total number.	Average 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.											
Government .. .. .	99,450	93,193	25,648	24,633	20,154	23,867	35,201	31,475	17,063	16,240	16,617	14,597	33,259	30,177	23,206	21,411	22,019	10,155	25,130	22,533	26,603	23,656	20,495	17,677
District, Municipal and Cantonment Staff.	432,039	407,604	644,735	597,639	643,867	597,402	708,116	636,195	701,513	640,254	746,488	688,803	823,812	751,959	844,602	785,379	842,045	777,165	876,409	806,657	975,246	898,128	929,246	853,087
Indian States .. .. .	1,544	1,202	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dispensaries .. .. .	13,808	10,784	820	723	589	573	3,845	3,473	1,762	1,542	1,969	1,769	1,912	1,826	1,689	1,571	1,711	1,557	1,678	1,577	1,715	1,643	644	615
Political Staff (Dera Ghazi Khan)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,360	1,260	2,593	2,458	..	..	..	..	..	..
Total	547,450	512,783	674,293	622,966	670,640	621,962	747,162	671,145	729,328	657,036	765,094	705,169	858,983	783,962	870,908	897,621	868,368	890,333	903,217	830,767	1,003,564	923,427	959,355	871,379

YORK.—The figures from 1867 to 1902 are taken from Annual Vaccination Reports of the Province as constituted during that period.



STATEMENT No. IV.—SHOWING TOTAL NUMBER OF PRIMARY AND REVACCINATIONS PERFORMED AND NUMBER INSPECTED BY CIVIL SURGEONS, DISTRICT HEALTH OFFICERS AND SUPERINTENDENTS OF VACCINATION OR OTHER INSPECTING OFFICERS, THE PERCENTAGES OF THOSE INSPECTED TOGETHER WITH THE PERCENTAGES OF CASES FOUND SUCCESSFUL BY THEM, AS CONTRASTED WITH PERCENTAGES REPORTED BY THE VACCINATORS IN EACH DISTRICT OF THE PUNJAB, DURING THE YEAR 1933-34.

Number.	DISTRICTS.	TOTAL NUMBER OF PERSONS VACCINATED.				TOTAL NUMBER INSPECTED.				PERCENTAGE OF INSPECTIONS TO TOTAL NUMBER VACCINATED.						PERCENTAGE OF CASES FOUND SUCCESSFUL TO TOTAL NUMBER INSPECTED.						PERCENTAGE OF SUCCESS REPORTED BY VACCINATORS.						
		By District Health Officers, Civil Surgeons and Medical Officers of Health.				By Superintendents of Vaccination.				Primary.		Re-vaccination.		Primary.		Re-vaccination.		Primary.		Re-vaccination.		Primary.	Re-vaccination.					
		Primary.	Re-vaccination.	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19								
1	Hissar	37,470	30,216	4,290	3,300	22,480	18,237	11,221	10,95	59,99	60,36	96,07	71,97	95,55	45,17	92,54	56,64	1										
2	Rohtak	32,383	42,792	2,492	872	3,649	1,195	7,70	2,03	11,27	2,79	94,50	65,60	93,37	58,74	95,58	60,59	2										
3	Gurgaon	29,604	150,391	1,816	6,911	3,399	12,281	6,13	4,59	11,48	8,17	91,13	78,82	94,67	65,24	98,44	90,29	3										
4	Karnal	34,936	54,235	2,092	3,912	18,111	15,911	5,99	7,21	51,84	29,34	99,44	53,45	99,44	63,43	99,06	78,11	4										
5	Ambed	28,802	65,007	1,039	763	4,567	4,802	3,61	1,17	15,86	7,39	92,40	43,12	92,31	59,23	96,47	61,56	5										
6	Simla	1,587	7,769	..	..	328	258	..	..	55,88	3,2	..	..	98,78	45,74	99,37	39,39	6										
7	Kangra	24,182	110,139	864	268	11,214	21,647	3,57	0,24	46,37	19,65	93,40	42,54	98,37	56,83	99,76	60,97	7										
8	Hoshiarpur	34,966	37,111	1,823	1,524	6,373	5,860	5,22	4,11	18,26	15,79	100,00	40,75	100,00	37,34	99,59	57,67	8										
9	Jullundur	36,223	35,679	2,948	4,704	8,324	6,274	8,14	13,18	22,98	17,58	97,96	90,09	96,98	56,31	97,26	56,68	9										
10	Ludhiana	25,004	106,881	5,611	15,495	9,765	27,583	22,44	14,60	39,05	25,52	98,20	35,17	98,64	39,52	98,89	43,52	10										
11	Ferozepore	44,926	113,032	17,113	41,315	28,412	61,419	38,09	36,55	63,24	54,34	98,22	52,79	95,79	40,08	98,65	73,74	11										
12	Lahore	59,976	78,950	24,372	19,147	47,393	35,704	40,64	24,25	79,02	45,30	98,85	56,36	99,55	47,50	98,47	64,59	12										
13	Amritsar	48,921	125,336	10,168	16,401	17,906	29,688	20,78	13,09	36,60	23,69	98,99	74,54	96,81	72,56	99,04	72,77	13										
14	Gurdaspur	43,144	125,527	1,643	2,353	7,867	6,236	3,81	1,88	18,23	4,97	95,74	62,80	97,62	56,08	99,15	66,57	14										
15	Sialkot	38,743	28,406	2,041	1,709	12,740	7,896	5,27	6,02	32,88	27,55	99,41	90,70	99,37	83,72	98,73	75,38	15										
16	Gujranwala	23,231	87,118	5,210	10,472	12,840	22,450	22,43	12,02	55,27	25,77	78,08	41,16	81,54	61,77	97,37	65,98	16										
17	Sheikhpura	23,712	45,478	9,761	8,443	12,631	15,374	41,16	18,57	53,27	33,81	99,58	52,15	99,01	34,53	98,21	58,56	17										
18	Gujrat	37,666	29,178	8,592	6,872	19,304	12,752	22,87	23,55	51,39	43,70	99,20	83,83	98,33	74,89	98,04	60,13	18										
19	Shahpur	26,740	35,240	4,187	5,355	6,852	7,694	15,66	15,19	25,62	21,83	98,85	45,60	97,23	28,36	97,48	41,55	19										
20	Jhelum	24,460	66,190	3,540	8,422	12,148	16,547	14,47	12,72	49,66	24,99	97,03	67,63	96,71	74,06	97,66	72,90	20										
21	Rawalpindi	21,385	58,143	3,050	6,310	5,166	20,206	14,26	10,85	24,16	34,75	99,18	55,15	97,56	64,48	99,74	60,80	21										
22	Attock	19,285	70,900	8,411	24,400	10,190	36,110	43,61	34,41	52,84	50,63	99,87	98,81	99,71	83,47	98,19	81,23	22										
23	Mianwali	14,465	31,739	1,521	3,466	7,991	15,543	10,51	10,92	55,24	48,97	98,55	74,00	97,22	79,41	98,67	82,23	23										
24	Montgomery	41,804	155,389	3,092	9,827	14,440	29,652	7,40	6,32	34,54	19,08	92,95	55,68	94,81	63,98	96,63	64,14	24										
25	Lyallpur	45,986	64,563	7,436	8,552	25,882	24,239	16,17	13,25	56,28	37,54	94,32	54,03	97,65	48,36	98,03	68,54	25										
26	Jhang	26,462	140,590	492	2,091	14,970	35,636	1,86	1,49	56,57	25,35	96,99	80,01	99,53	92,60	98,82	84,54	26										
27	Multan	44,463	82,988	5,917	7,472	24,117	35,394	13,31	9,00	54,24	42,65	97,23	41,02	99,29	53,23	98,97	67,05	27										
28	Muzaffargarh	27,981	142,069	1,369	9,138	9,367	32,645	4,89	6,43	33,48	22,08	96,19	65,30	99,57	75,92	99,99	79,15	28										
29	Der Ghazi Khan	30,981	92,497	9,373	25,766	24,652	50,791	30,25	27,86	79,67	54,91	97,07	21,13	98,78	41,74	99,39	66,21	29										
	Special staff	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Assistant Director of Public Health, Ambala Circle.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Assistant Director of Public Health, Rawalpindi Circle.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Assistant Director of Public Health, Lahore Circle.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Total	948,711	2,255,968	152,115	256,312	412,392	628,578	16,03	11,36	43,47	27,86	97,07	58,06	97,37	58,78	98,14	69,30											



## STATEMENT V.

STATEMENT SHOWING THE ANNUAL NUMBER OF SUCCESSFUL VACCINATIONS AND THE ANNUAL RATIO OF DEATHS FROM SMALL-POX PER 1,000 OF POPULATION IN EACH DISTRICT OF THE PUNJAB FOR FIVE YEARS ENDING 1933-34.

Number.	District.	1929-30.		1930-31.		1931-32.		1932-33.		1933-34.		Number.
		Number of successful cases.	Annual ratio of deaths from small-pox per 1,000.	Number of successful cases.	Annual ratio of deaths from small-pox per 1,000.	Number of successful cases.	Annual ratio of deaths from small-pox per 1,000.	Number of successful cases.	Annual ratio of deaths from small-pox per 1,000.	Number of successful cases.	Annual ratio of deaths from small-pox per 1,000.	
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Hissar ..	30,519	0·64	38,300	0·56	38,976	0·29	45,806	0·36	46,851	0·55	1
2	Rohtak ..	39,748	0·30	36,661	0·35	39,060	0·04	44,882	0·08	51,281	0·13	2
3	Gurgaon ..	40,487	0·26	49,751	0·29	33,245	0·01	53,917	0·04	145,202	0·05	3
4	Karnal ..	49,975	0·32	43,381	0·20	47,281	0·03	56,584	0·02	66,297	0·03	4
5	Ambala ..	37,203	0·23	36,098	0·27	36,813	0·06	40,745	0·06	54,524	0·07	5
6	Simla ..	2,395	0·34	895	0·17	992	0·03	1,218	0·03	392	0·03	6
7	Kangra ..	51,433	0·05	51,375	0·04	54,160	0·01	87,825	0·20	71,223	0·07	7
8	Hoshiarpur ..	38,733	0·76	33,434	0·61	38,346	0·16	57,365	0·45	50,205	0·80	8
9	Jullundur ..	34,123	0·20	33,675	0·11	39,409	0·04	52,419	0·09	51,052	0·05	9
10	Ludhiana ..	33,188	0·72	28,777	0·26	28,267	0·03	37,154	0·19	55,963	0·03	10
11	Ferozepore ..	44,188	0·32	46,995	0·53	47,694	0·17	131,350	0·26	107,913	0·20	11
12	Lahore ..	64,514	0·58	59,389	0·38	64,280	0·29	180,778	1·35	96,577	0·51	12
13	Amritsar ..	58,559	0·32	64,504	0·19	69,998	0·11	157,670	0·26	114,220	0·10	13
14	Gurdaspur ..	51,183	0·21	57,588	0·12	64,973	0·06	89,998	0·16	107,544	0·09	14
15	Sialkot ..	37,552	0·25	46,380	0·38	48,731	0·39	83,419	0·72	54,084	0·34	15
16	Gujranwala ..	23,219	0·29	27,175	0·17	26,665	0·11	95,744	0·70	66,753	0·51	16
17	Sheikhupura ..	24,631	0·23	31,657	0·16	34,019	0·08	56,491	0·91	41,082	0·77	17
18	Gujrat ..	34,945	0·61	39,097	0·40	40,855	0·29	52,469	0·60	48,222	0·27	18
19	Shahpur ..	24,027	0·88	21,904	0·06	27,854	0·08	84,546	1·31	34,323	0·67	19
20	Jhelum ..	33,939	0·42	36,894	0·23	30,308	0·10	55,153	0·77	61,407	0·46	20
21	Rawalpindi ..	28,763	0·30	46,299	0·05	34,074	0·01	77,510	0·15	46,454	0·31	21
22	Attock ..	25,378	0·38	28,648	0·07	41,304	0·06	72,824	0·19	69,474	0·36	22
23	Mianwali ..	20,245	0·06	24,169	0·06	26,623	0·02	35,555	0·14	37,808	0·27	24
24	Montgomery ..	33,201	0·35	36,766	0·27	42,196	0·15	143,777	0·54	113,719	0·56	24
25	Lyallpur ..	40,744	0·21	44,448	0·07	53,272	0·09	162,948	0·54	76,973	0·29	25
26	Jhang ..	32,875	0·10	33,692	0·07	40,128	0·09	93,352	0·21	121,326	0·38	26
27	Multan ..	39,901	0·09	54,886	0·26	71,323	0·15	82,910	0·22	82,043	0·17	27
28	Muzaffargarh ..	47,964	0·03	58,751	0·02	65,779	0·10	104,758	0·003	125,656	0·03	28
29	Dera Ghazi Khan	103,364	0·04	107,677	0·11	37,649	0·24	59,250	0·25	79,497	0·06	29
	Total ..	1,126,996	0·34	1,219,266	0·24	1,224,274	0·13	2,298,417	0·41	2,078,065	0·30	
	Special Staff ..	55,172	..	44,374	..	34,956	..	49,692	..	37,141	..	
	Cantonment Staff	9,100	0·12	15,757	0·05	11,026	0·09	27,789	0·11	12,871	0·03	
	Dispensary Staff ..	3,187	..	2,721	..	3,017	..	6,926	..	2,241	..	
	Political Staff, Dera Ghazi Khan.	..	..	3,951	..	..	..	..	..	..	..	
	GRAND TOTAL ..	1,194,455	0·34	1,286,069	0·24	1,273,273	0·13	2,382,824	0·41	2,130,318	0·30	



