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MUNICIPAL DEPARTMENT.

MEDICAL.

DARJEELING, THE 24TH AUGUST 1886.

RESOLUTION.

READ—

The Annual Report of the Government Cinchona Plantation and Cinchona Factory in Bengal for the year 1885-86.

The most important feature of last year's operations was that the planting was entirely confined to yellow bark trees, no red bark having been put out anywhere. 187,000 plants of the hybrid variety, and 239,000 of *Calisaya Ledgeriana*, were planted out. There are now over five millions of trees of various ages in the plantation, namely, red (*Succirubra*) 2,932,000, yellow (*Calisaya Ledgeriana*) 1,325,118, yellow (*Calisaya Verde* and *Morada*) 183,300, hybrid 572,100, and other kinds 25,093. The crop of the year was not large, having amounted to 205,410lbs. of dry bark, of which 181,280lbs. were red, 15,950lbs. were *Calisaya*, and 8,180lbs. were hybrid bark. The bulk of the crop was as usual made over to the febrifuge factory.

2. The expenditure on the plantation amounted to Rs. 79,728-2, against the budget allotment of Rs. 97,805. Of this, Rs. 12,052-9-9 represents the capital expenditure on the young trans-Teesta plantation at Rungjung, which has not yet come into bearing; and the balance Rs. 67,675-8-3 the working expenses of the old plantations at Mungpoo, including Rungbee and Sittong. The capital account is thus brought up to Rs. 10,96,255; but, as has been explained in previous years, this has been recouped by the saving effected by the substitution of cinchona febrifuge for quinine in Government medical institutions.

3. The demand for the febrifuge was considerably less than in previous years. The outturn from the factory, which is regulated by the demand, accordingly fell from 6,464lbs. in 1884-85 to 4,743lbs. during 1885-86—namely, 4,625lbs. of ordinary and 118lbs. of crystalline febrifuge. Certain improvements devised in the method of working the factory, and the introduction of grinding machinery, have raised the percentage of febrifuge obtained from the bark to three per cent. The cost of manufacture, however, rose to Rs. 12-11-2 per pound of ordinary febrifuge, and Rs. 19-0-9 per pound of crystalline febrifuge. The rates exceed those of the preceding year by five annas per pound in the case of the former, and by eight annas per pound in the case of the latter. This was entirely due to the smaller quantity manufactured.

4. The issues during the year were less than in 1884-85 by 1,653lbs., as will be seen from the table below:—

		1884-85.	1885-86.
		lbs. oz.	lbs. oz.
To Medical depôt, Calcutta	..	2,024 8	1,419 8
" ditto, Bombay	..	500 0	Nil.
" ditto, Madras	..	20 0	Nil.
" Inspector-General of Civil Hospitals, Bengal (for district medical officers of Bengal)	..	571 0	587 8
" Inspector-General of Jails, Bengal (for jails and lock-ups in Bengal)	..	61 0	77 8
Sold to the public	..	3,965 8	3,413 4
Given as samples	..	10 4	2 0
Total	..	7,152 4	5,499 4

The decline in the issues is entirely due to the presence, at the depôts at Calcutta, Madras and Bombay, of the large quantity (7,000 pounds) of London made febrifuge sent out for sale under instructions from the Secretary of State. 3,500 pounds of this have been made over to the Bengal depôt, while 1,750 pounds have been distributed to the depôts at Madras and Bombay respectively; and until these large supplies are absorbed, the demand for the Mungpoo

febrifuge must continue to be limited. The decrease in the sale of febrifuge to the public is due to the extremely low price (Rs. 2-1 per ounce) at which quinine was obtainable in the market during the year. It is, however, anticipated that the depression in the price of quinine, which is due to special causes, will not last.

5. The revenue derived from the sale of the febrifuge, seed, plants and bark amounted to Rs. 93,476-14 against Rs. 1,24,225-2 in the previous year.

	Rs.	A.	P.
By sale of febrifuge, seed, plants and bark to the public..	58,594	14	0
By credit from the Medical depôt, Calcutta ..	23,663	8	0
Ditto Inspector-General of Civil Hospitals, Bengal ..	9,835	0	0
Ditto Inspector-General of Jails, Bengal ..	1,383	8	0
Total ..	93,476	14	0

The actual profit exhibited on the year's working amounts to Rs. 30,220-15-2. Dr. King points out that in addition to this should be taken into account the 2,054lbs. of febrifuge supplied to Government medical institutions in substitution for quinine, the value of which, at the most moderate calculation, amounts to Rs. 33,000.

6. The thanks of the Lieutenant-Governor are due to Dr. King for his continued efficient management of the Department, and to Mr. Gamuie, who held executive charge of the plantation and factory. The other assistants are well spoken of.

ORDER.—Ordered that a copy of this Resolution, and of the Report referred to, be submitted to the Government of India in the Home Department, to the Superintendent of the Government Cinchona Plantation, to the Government of Madras, and to the Inspector-General of Civil Hospitals, Bengal, for information.

By order of the Lieutenant-Governor of Bengal,

R. H. WILSON,

Offg. Secretary to the Government of Bengal.

No. 1448T—M.

COPY, with copy of the report, forwarded to the Government of Madras for information.

By order of the Lieutenant-Governor of Bengal,

Under-Secretary to the Government of Bengal.

DARJEELING,
The 24th August 1886.

ANNUAL REPORT ON THE GOVERNMENT CINCHONA PLANTATION IN BENGAL FOR THE YEAR 1885-86.

No. 40C, dated Royal Botanic Garden, Seebpore, near Calcutta, the 15th July 1886.

From—SURGEON-MAJOR GEORGE KING, M.B., Superintendent, Royal Botanic Garden, Calcutta, and of Cinchona Cultivation in Bengal, and Offg. Government Quinologist,

To—The Secretary to the Government of Bengal, Financial Department.

I HAVE the honour herewith to submit the combined annual report of the cinchona plantation and factory for the year ending 31st March 1886, the combination of the two reports in one having been sanctioned in paragraph 2 of your office letter No. 846T—M, Municipal Department—Medical, dated Darjeeling, the 3rd July 1885.

Twenty-fourth Annual Report of the Government Cinchona Plantation and Factory in British Sikkim for the year 1885-86, by SURGEON-MAJOR G. KING, M.B., LL.D., F.L.S., Superintendent of the Royal Botanic Garden, Calcutta, and of Cinchona Cultivation in Bengal, and Offg. Government Quinologist.

Planting operations were carried on in all three divisions of the cinchona reserve—Mungpoo, Sittong, and Rungjung; but they were confined to yellow bark trees, no red barks having been put out anywhere. The reason for this preference of yellow over red bark has been fully explained in former reports, and need not be repeated now. The actual details of the year's planting are as follows:—

	Hybrid.	Calisaya, variety ledgeriana.	Total.
Mungpoo	151,000	113,000	267,000
Sittong	33,000	21,000	54,000
Rungjung		105,000	105,000
Total	187,000	239,000	426,000

As against this increase of 426,000 new trees, the plantation was diminished by the uprootal of 300,500 old and feeble red bark trees for the sake of their bark, and by the abandonment of 2,500 stock plants in the nurseries, which had become effete and useless. The net increase of the trees in the plantation for the year was thus 123,000. The plantations now contain over five millions of trees of various ages, the exact details of the census being given in the following table:—

Table showing the total number of Cinchona trees of all sorts standing in the Plantations on the 31st March 1886.

	Red cinchona, Succirubra.	Yellow cinchona, Calisaya ledgeriana.	Yellow cinchona, Calisaya verde and morada.	Hybrid, unnamed variety.	Other kinds.	Total of all sorts.
Mungpoo Division	1,932,000	914,118	134,300	490,100	25,093	3,504,611
Sittong ditto	1,000,000	91,000	16,000	73,000		1,179,000
Rungjung ditto		320,000	34,000			354,000
Grand total of all kinds ...	2,932,000	1,325,118	184,300	672,100	25,093	5,037,611

2. Details of the year's crop.—The crop taken during the year was not a large one. It amounted in all to 205,410 pounds of dry bark, of which

181,280 pounds were red, 15,950 pounds were *calisaya*, and 8,180 pounds were hybrid bark. The red bark was obtained by uprooting the inferior trees already alluded to, and the *calisaya* and hybrid bark was obtained by thinning and pruning parts of the younger plantation where the trees had begun to crowd each other. The crop of the past season brings the total yield of the plantation since its commencement up to 3,462,337 pounds of dry bark. The sales of bark during the year were, as is invariably the case, small (44 pounds); and only 100 pounds were issued to the Medical Depot in Calcutta. The bulk of the crop was therefore as usual made over to the factory.

3. *Expenditure for the year.*—The budget allotment for the plantation amounted to Rs. 97,805, but owing to the orders received on the subject of reducing expenditure, a saving of Rs. 18,076-14 was effected. The actual expenditure was therefore only Rs. 79,728-2. Of this sum, Rs. 12,052-9-9 were incurred on the young trans-Teesta plantation at Rungjung, which has not yet come into bearing; the remainder (Rs. 67,675-8-3) was spent on the old plantations at Mungpoo (including Rungbee) and Sittong. The Rungjung expenditure is therefore debitable to the capital account, while that on the older plantations has to be treated as working expenditure against which is to be put the bark crop for the year. The account stands as follows:—

	Rs.	A.	P.	Rs.	A.	P.
Total expenditure for the year 1885-86 ...	79,728	2	0			

Capital expenditure.

On Rungjung (new plantation) ...	10,052	9	9
Proportion of European establishment, office, &c. ...	2,000	0	0
Total ...	12,052	9	9

Working expenses.

On upkeep of plantation of Rungbee, Mungpoo, and Sittong, and in production of 205,410 pounds of bark ...	67,675	8	3
	79,728	2	0

By the addition of the item for Rungjung the capital account is brought up to Rs. 10,96,255. But, as has been explained in previous reports, the capital account has really been extinguished twice over by the savings which Government has been enabled to effect in its own medical institutions by the substitution of cinchona febrifuge for quinine. If the bark crop (205,410 pounds) for the year be set against the working expenses, the price of the bark per pound is seen to be annas 5 pies 3-2573.

4. *Factory.*—A separate budget estimate is submitted for the factory, and for the year under review the estimate was Rs. 28,300. Savings to the amount of Rs. 3,969-9-5 were, however, effected upon that sum, and the net factory expenditure for the year was only Rs. 24,330-6-7. The details of this expenditure will be found in Appendix G. The outturn from the factory during the year was 4,625 pounds of ordinary and 118 pounds of crystalline febrifuge. During the year some improvements in the method of working the factory were introduced by Mr. Gammie, who is in executive charge of it. Grinding machinery was also fitted up towards the end of the year. The effect of these improvements has been to raise the percentage of febrifuge obtained from the bark to about 3 per cent.—a result which, considering the poor quality of much of the bark supplied to the factory, was, I think, satisfactory. The amount of red bark used in the manufacture of febrifuge was 159,400 pounds, while 240 pounds of yellow bark were used in experiment. Of this bark 127,229 pounds were of last year's crop, which cost at the rate of annas 3 pies 3-196 per pound: the remainder, viz., 32,411 pounds, was of the crop 1885-86, which cost annas 5 pies 3-257 per pound. The total cost of the bark and chemicals used in

the factory and of the outturn may be seen at a glance from the following table:—

<i>Expenditure—</i>	Rs.	A.	P.
Bark used in factory—			
127,229 pounds, at As. 3 pies 3-196 per pound ...	25,973	4	3
32,411 pounds, at As. 5 pies 3-2573 per pound ...	10,678	4	8
Chemicals and labour ...	24,330	6	7
Total ...	60,981	15	6

<i>Outturn—</i>	Rs.	A.	P.
4,625 pounds of ordinary febrifuge, at Rs. 12 as. 11 pies 2-262 per pound ...	58,734	3	0
118 pounds of crystalline febrifuge, at Rs. 19 pies 9-393 per pound ...	2,247	12	6
	60,981	15	6

The cost of production of the febrifuge is therefore more by five annas per pound, and the cost of crystalline febrifuge more by eight annas per pound than during 1885-86. This arises from the smaller quantity manufactured; and the quantity manufactured was in turn regulated by the demand. By the addition of the outturn of the year under review to that of previous years, the total production of the factory since its beginning is brought up to 75,233 $\frac{1}{2}$ pounds of ordinary and crystalline febrifuge, as may be seen from the table given as Appendix H.

5. *Sales of febrifuge for the year.*—The total issues for the year consisted in all of 5,499 $\frac{1}{2}$ pound, viz., 5,306 $\frac{3}{4}$ pounds of ordinary and 192 $\frac{1}{2}$ pounds of crystalline febrifuge, as will be seen by the subjoined table:—

Details of the distribution of Cinchona and Crystalline Febrifuge during the financial year 1885-86.

	lbs	oz.
To Medical Depot, Calcutta, viz.—		
Cinchona febrifuge ...	1,419	0
To Inspector-General of Civil Hospitals, Bengal (for district medical officers of Bengal), viz.—		
Cinchona febrifuge ...	570	4
Crystalline " ...	17	4
To Inspector-General of Jails, Bengal (for jails and lock-ups in Bengal), viz.—		
Cinchona febrifuge ...	65	8
Crystalline " ...	12	0
Sold to the public, viz.—		
Cinchona febrifuge ...	3,220	12
Crystalline " ...	192	8
Given as samples, viz.—		
Cinchona febrifuge ...	1	0
Crystalline " ...	1	0
Total ...	5,499	4

These figures are lower than those for last year by 1,653 pounds. And the diminution is chiefly due to the medical depôts, the Calcutta depôt having taken only 1,419 pounds as against 2,024 $\frac{1}{2}$ pounds for the previous year; while the Bombay and Madras depôts took none as against 500 pounds and 20 pounds respectively for the previous year. The falling off in the depôt demands is entirely explained by the fact that the Secretary of State about eighteen months ago sent out to India 7,000 pounds of febrifuge which, under his instructions, had been manufactured in London. This febrifuge was distributed in the proportion of 3,500 pounds to the Bengal depôt, and of 1,750 pounds to each of those of Bombay and Madras. The Secretary of State's febrifuge closely resembles that manufactured at Mungpoo, and until these large supplies of it shall have been absorbed, the indents of the depôts for the Mungpoo must remain low. The quantity taken by the general public during the year was 3,413 $\frac{1}{4}$ pounds as against 3,965 $\frac{1}{2}$ pounds for the year previous. The diminution of 552 $\frac{1}{4}$ pounds is no doubt due to the extremely low price

of quinine during the year. At present quinine can be freely bought in Calcutta for Rs. 2-1 per ounce. There is therefore comparatively little inducement to the public to buy febrifuge at about half that price. It was quite a different matter some years ago when the bazar rate of quinine was seven or eight times higher than at present, while febrifuge was obtainable at the rate at which it has uniformly been sold since its manufacture was begun at Mungpoo. The present low rate of quinine is due to special causes which are not likely to last; and with an increase in the price of quinine, the public demand for febrifuge will doubtless improve.

6. *Stock account.*—The stock of raw material and of manufactured products for the past year stands as follows. And for comparison the stock at the end of the previous year is given side by side with it:—

Stock on 31st March 1885.			Stock on 31st March 1886.		
	Rs.	A. P.		Rs.	A. P.
Chemicals and stores ...	4,000	0 0	Chemicals and stores ...	1,000	0 0
Cinchona febrifuge, 1,831½ lb, at Rs. 12-5-11-38½ per pound.	22,692	15 4	Cinchona febrifuge, 1,182-12 at Rs. 12-11-2-262 per pound.	15,020	1 3
Crystalline febrifuge, 183½ lb, at Rs. 18-8-11-076 per pound.	3,396	11 4	Crystalline febrifuge, 78½ lb, at Rs. 19 pies 9-393 per pound.	1,490	9 3
Bark, 209,723½ lb, at 3 annas 3-196 pies per pound.	42,814	1 2	Bark, 255,393½ lb, at As. 5 pies 3-2573 per pound.	64,113	1 4
	72,903	11 10		101,653	11 10
Increase in value ...	28,750	0 0			
Total ...	1,01,653	11 10	Total ...	101,653	11 10

7. *Financial result of the year's working.*—The figures which have already been given afford the materials for showing what the exact financial result of the year has been; in other words, for making up a balance sheet.

DR. Balance sheet.			CR.		
	Rs.	A. P.		Rs.	A. P.
To value of stock on 31st March 1885 ...	72,903	11 10	By value of stock on 31st March 1886 ...	1,01,653	11 10
To cash received from treasury during 1885-86 for expenditure on old plantations, viz., Kungbee, Mungpoo, and Sittong ...	67,675	8 3	By cash receipts from sale of cinchona and crystalline febrifuge, seed, plants, and bark ...	58,594	14 0
To cash received from treasury during 1885-86 for factory ...	21,368	11 2	By credit from Medical Depot, Calcutta, for cinchona febrifuge ...	21,413	8 0
To stores from England ...	2,961	11 6	By credit from Medical Depot, Calcutta, for cinchona bark ...	250	0 0
Profit on the year's working ...	30,220	15 2	By credit from Inspector-General of Civil Hospitals, Bengal, for cinchona febrifuge and crystalline febrifuge supplied to district medical officers of Bengal, viz.—		
			For cinchona febrifuge ...	9,418	
			„ crystalline „ ...	417	
				9,835	0 0
			By credit from Inspector-General of Jails, Bengal, for cinchona febrifuge and crystalline febrifuge supplied to jails and lock-ups in Bengal, viz.—		
			For cinchona febrifuge ...	1,083	8
			„ crystalline „ ...	290	0
				1,373	8 0
			By credit from Inspector-General of Jails, Bengal, for cinchona bark ...	10	0 0
Total ...	1,95,130	9 10	Total ...	1,95,130	9 10

8. From this balance sheet it appears that the actual profit on the season's working amounts to Rs. 30,220. But besides this there has to be taken into account the saving effected to Government by the substitution in its own medical institutions of 2,054 pounds of febrifuge for an equal amount of quinine. And that saving at the most moderate calculation amounts to Rs. 33,000.

9. The sum of Rs. 1,721-13 was raised as land rent and grazing dues from cultivators settled on the parts of the reserve which are unsuitable for cinchona cultivation. The whole amount of this was paid into the Darjeeling Treasury, no credit having been taken for it amongst the plantation receipts.

10. In the manufacture of febrifuge a considerable quantity of fuel is required; and, the natural forest having nearly disappeared from the part of the reserve within easy distance of the factory, a fuel plantation was, with the sanction of Government, begun some years ago. This plantation has been annually added to as circumstances permitted, and it now extends to about 300 acres. Its present condition is highly satisfactory and its promise for the future is excellent.

11. For the crop of bark to be taken for the year now entered upon, I propose as usual to be guided by the demand for febrifuge. Probably about 250,000 pounds of red bark will be required—an amount that can easily be supplied.

12. During the year the executive charge of the plantation and factory have been in the hands of Mr. J. Gammie, whose excellent services are already so well known to Government. Mr. Pantling has also done good service, and he conducted Mr. Gammie's duties to my satisfaction during the absence of the latter on privilege leave. To Messrs. Parkes and Gammie, junior, my thanks are also due for the manner in which they have carried on their duties. Babu Gopal Chundra Datta, in charge of the office, has also done very satisfactory work. During the year Mr. Kennedy, one of the assistants, was promoted to the curatorship of the Lloyd Botanic Garden at Darjeeling, and a new man to take his place was indentured for from the Secretary of State, but at the end of the year the new officer had not arrived.

13. The usual returns (nine in number) are appended.

A.

Table showing the number and distribution of Cinchona plants in the Government Plantations, Sikkim, on 1st April 1886.

MUNGPOO DIVISION.									
	PLANTATIONS.			NURSERY.					Total nursery stock on 1st April 1886.
	Number in permanent plantation on 1st April 1886.	Unrooted during the year 1885-86.	Planted during the year 1885-86.	Number in permanent plantation on 1st April 1886.	Number of stock plants for propagation on 1st April 1886.	Number of seedlings or rooted cuttings in nursery beds for permanent plantation.	Number of rooted plants in seed or cutting beds.		
Cinchona Hybrid	345,100	200,000	154,000	490,100	4,000	180,000		184,000	
„ Succirubra	2,132,000	200,000		1,632,000		40,000		40,000	
„ Calisaya Leogeriana	801,118		113,000	914,118					2,500
„ Calisaya Verde and Morada	134,300			134,300	2,500				
„ Mierantha	600	500							
„ Officinalis	20,000			20,000					
„ Pabudiana	5,092			5,092					3
„ Hard Carthagena	1			1					
Total	3,438,111	200,500	267,000	3,504,611	6,500	220,000		226,500	

B.

Table showing the number and distribution of Cinchona plants in the Government Plantations, Sikkim, on 1st April 1886.

SITTONG DIVISION.									
	PLANTATION.			NURSERY.					Total nursery stock on 1st April 1886.
	Number in permanent plantation on 1st April 1886.	Unrooted during the year 1885-86.	Planted during the year 1885-86.	Number in permanent plantation on 1st April 1886.	Number of stock plants for propagation on 1st April 1886.	Number of seedlings or rooted cuttings in nursery beds for permanent plantation.	Number of rooted plants in seed or cutting beds.		
Cinchona Hybrid	40,000		33,000	73,000		50,000		50,000	
„ Succirubra	1,100,000	100,000		1,000,000					
„ Calisaya Leogeriana	70,000		21,000	91,000					
„ Calisaya Verde and Morada	15,000			15,000					
Total	1,225,000	100,000	54,000	1,179,000		50,000		50,000	

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C.

Table showing the number and distribution of Cinchona plants in the Government Plantations, Sikkim, on 1st April 1886.

Rungjung Division.								
	PLANTATION.				NURSERY.			
	Number in permanent plantation on 1st April 1885.	Unrooted during the year 1885-86.	Planted during the year 1885-86.	Number in permanent plantation on 1st April 1886.	Number of stock plants for propagation on 1st April 1886.	Number of seedlings or rooted cuttings in nurseries for permanent plantation.	Number of rooted plants in seed or cutting beds.	Total nursery stock on 1st April 1886.
Cinchona Calisaya Ledgeriana	215,000		105,000	320,000		100,000		100,000
Calisaya Verde and Morada	34,000			34,000				
Total	249,000		105,000	354,000		100,000		100,000

D.

Account of dry Cinchona bark collected during season 1885-86.

	Root.	No. 1 stem.	No. 2 stem.	Branch.	Total.	
Succirubra—		lb	lb	lb	lb	
Mungpoo, thinning	19,560	40	18,600	10,300	48,500	
Sittong, ditto	9,400	520	6,500	32,040	51,460	
Rungbee, ditto	3,610	1,730	4,130	5,990	15,460	
Total	32,570	2,290	29,230	51,330	115,420	
Mungpoo, uprooting	15,530	230	13,680	13,830	43,270	
Rungbee, ditto	6,670	1,430	6,950	7,540	22,590	
Total	22,200	1,660	20,630	21,370	65,860	
Total Succirubra	54,770	3,950	49,860	72,700	181,280	181,280
Calisaya—						
Mungpoo, thinning	1,700	10	1,430	2,010	5,180	
Sittong, ditto	290		120	250	570	
Labdali, ditto	3,360		2,100	4,740	10,200	
Total Calisaya	5,350	10	3,650	7,000	15,950	15,950
Hybrid—						
Mungpoo, thinning	750	10	1,000	4,520	6,370	
Sittong, ditto	330		250	340	920	
Rungbee, ditto	40		140	710	890	
Total Hybrid	1,120	10	1,490	5,570	8,180	8,180
GRAND TOTAL OF ALL SORTS						205,410

E.

Stock of Bark on 1st April 1886.

	lb
Succirubra bark	...
Calisaya "	149,109
Officinalis "	78,224
Micrantha "	6,010
Pahudiana "	3,977
Hybrid "	600
Total	17,473
	255,393

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F.

Table showing the produce of the Government Cinchona plantations in British Sikkim since their beginning.

MUNGPOO DIVISION.				lb
Dry bark collected by pruning and thinning during 1869-70...				2,400
Ditto	ditto	ditto	1870-71...	12,500
Ditto	ditto	ditto	1871-72...	39,000
Ditto	ditto	ditto	1872-73...	NIL
Ditto	ditto	ditto	1873-74...	16,000
Ditto	ditto	ditto	1874-75...	39,405
Crop of 1875-76	...	...	...	211,931
" of 1876-77	...	...	...	207,781
" of 1877-78	...	...	...	344,225
" of 1878-79	...	...	...	261,659
" of 1879-80	...	...	...	345,740
" of 1880-81	...	...	...	348,560
" of 1881-82	...	...	...	298,780
" of 1882-83	...	...	...	358,100
" of 1883-84	...	...	...	253,270
" of 1884-85	...	...	...	300,125
" of 1885-86	...	...	...	152,460
Total				3,191,936

SITTONG DIVISION.

SHITONG DIVISION.				lb
Dry bark collected by pruning and thinning during			1879-80	... 15,850
	ditto	ditto	1880-81	... 28,965
Ditto	ditto	ditto	1881-82	... 42,790
Ditto	ditto	ditto	1882-83	... 38,880
Ditto	ditto	ditto	1883-84	... 51,890
Ditto	ditto	ditto	1884-85	... 39,076
Ditto	ditto	ditto	1885-86	... 52,950
Ditto	ditto	ditto		
Total				... 270,401

G.

Manufacture account, 1885-86.

	Rs.	A.	P.
Paid for muriatic acid, 22,599½ lb	4,237	6	6
" " packages of ditto	258	8	0
" " carriage of ditto	1,870	5	0
" " of empty jars	715	5	0
" " soda (caustic)	1,123	14	0
" " carriage and storage of soda	399	1	0
" " fusel oil	1,162	0	5
" " charcoal	312	8	0
" " casks and other plant	1,188	0	9
" " carriage of other stores	495	6	0
" " sundry expenditure	602	7	0
" " labour in factory	2,794	8	3
" " quinologist	3,103	5	6
" " carriage of cinchona and crystalline febrifuge...	318	5	0
" " tins for ditto	253	8	0
" " advertisement charges	844	1	0
" " labour in packing, &c.	1,690	1	9
" " stores from England	2,961	11	5
Total	24,330	6	7

	Rs.	A.	P.
Cost of bark, 127,229 lb (crop of 1884-85), at As. 3 pies 3-196 per pounds	25,973	4	3
Cost of bark, 32,411 lb (crop of 1885-86), at As. 5 pies 3-2573 per pound	10,678	4	8
	36,651	8	11
	60,981	15	6

By cinchona febrifuge produced, 4,025 lb at Rs. 12-11-2-262 per pound	58,734	6	0
By crystalline febrifuge produced, 118 lb at Rs. 19 pies 9-393 per pound	2,247	12	6
	60,981	15	6

II.

Table showing the amount of Cinchona and Crystalline Febrifuge produced from the commencement to 31st March 1886, and the stock at the latter date.

	lb oz.		lb oz.
Manufactured in 1874-75	... 48 10	Supplied to Medical Depôt, Calcutta,	
Ditto in 1875-76	... 1,919 6	viz.—	
Ditto in 1876-77	... 3,750 12	Cinchona febrifuge	... 26,879 3
Ditto in 1877-78	... 5,162 0	Crystalline	... 21 8
Ditto in 1878-79	... 7,007 0	Supplied to Medical Depôt, Bombay,	
Ditto in 1879-80	... 9,434 13	viz.—	
Ditto in 1880-81	... 9,296 0	Cinchona febrifuge	... 8,700 0
Ditto in 1881-82	... 8,610 0	Supplied to Medical Depôt, Madras,	
Ditto in 1882-83, viz.—		viz.—	
Cinchona febrifuge	... 10,363 4	Cinchona febrifuge	... 2,830 0
Crystalline	... 300 0	Crystalline	... 20 0
Manufactured in 1883-84, viz.—		Supplied to Straits Settlements	... 30 0
Cinchona febrifuge	... 8,464 0	Ditto to Colonial Government, Mauri-	
Crystalline	... 250 0	ritius	... 150 0
Manufactured in 1884-85, viz.—		Supplied to Inspector-General of Civil	
Cinchona febrifuge	... 6,079 0	Hospitals, Bengal (for district	
Crystalline	... 385 0	medical officers of Bengal), viz.—	
Manufactured in 1885-86, viz.—		Cinchona febrifuge	... 3,531 4
Cinchona febrifuge	... 4,625 0	Crystalline	... 41 8
Crystalline	... 118 0	Supplied to Inspector-General of Jails,	
		Bengal (for jails and lock-ups in	
		Bengal), viz.—	
		Cinchona febrifuge	... 191 4
		Crystalline	... 21 0
		Sold for cash, viz.—	
		Cinchona febrifuge	... 30,557 4
		Crystalline	... 854 12
		Samples, viz.—	
		Cinchona febrifuge	... 129 2
		Crystalline	... 10 0
		Stock in hand on 31st March 1886,	
		viz.—	
		Cinchona febrifuge	... 1,182 12
		Crystalline	... 78 4
Total	... 75,233 13	Total	... 75,233 13

I.

Cash income for 1885-86.

	Rs.	A.	P.
Cash received from sale of cinchona febrifuge and paid into the Bank of Bengal	53,333	0	0
„ received from sale of crystalline cinchona febrifuge and paid into the Bank of Bengal	4,727	0	0
„ received from sales of cinchona seed, plants, and bark and paid into the Bank of Bengal	534	14	0
Credit for cinchona febrifuge supplied to Medical Depôt, Calcutta	23,413	8	0
„ for cinchona bark supplied to Medical Depôt, Calcutta	250	0	0
„ for cinchona febrifuge supplied to Inspector-General of Civil Hospitals, Bengal (for district medical officers of Bengal)	9,418	0	0
„ for crystalline cinchona febrifuge supplied to Inspector-General of Civil Hospitals, Bengal (for district medical officers of Bengal)	417	0	0
„ for cinchona febrifuge supplied to Inspector-General of Jails, Bengal (for jails and lock-ups in Bengal)	1,083	8	0
„ for crystalline cinchona febrifuge supplied to Inspector-General of Jails, Bengal (for jails and lock-ups in Bengal)	290	0	0
„ for cinchona bark supplied to Inspector-General of Jails, Bengal (for the Alipore Jail Hospital)	10	0	0
Total credit in India	93,476	14	0

GEORGE KING, M.D., Surgeon-Major,

Superintendent, Royal Botanic Garden, Calcutta, and of Cinchona
Cultivation in Bengal, and Offg. Govt. Quinologist.

408-7-85-60 3496.1ms.

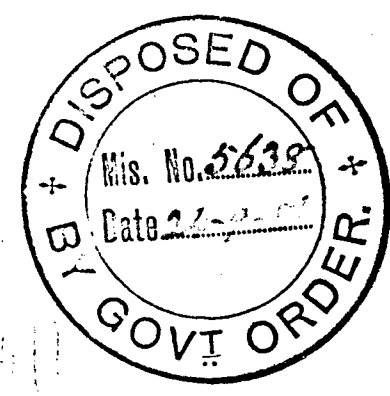
(1886.)

REVENUE DEPARTMENT.

✓ No. 7270.

From the Govt. of Bengal.

For No. 5638



Dated 24th Aug: 1886.
Received 7th Sep: 1886.

Enclosures 4

No. 1448 J. M.

SUBJECT.

Review in the Annual
Report of the Govt. Cinchona
Plantation & Cinchona Factory
in Bengal for 1885-86.

*to the Secy of Revenue
to the Govt of Bengal*

Mis. No. 5638

Communicated to the Board of
and the Director of Govt Cinchona
Plantations.

Has
23-9