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MADRAS RECORD OFFICE.

Government of Madras.

Revenue DEPARTMENT.

G.O. No.

80

Press
Mis.

Dated

12.1

1872

Not to be folded or roughly handled

*Proceedings of the Madras Government, Revenue Department,
12th January 1872.*

No. 158. Read the following letter from the Commissioner of the Nilgiris, to the Secretary to Government, Revenue Department, dated Ootacamund, 27th October 1871, No. 83 :—

With reference to Government Order, 26th May 1871, No. 933, I have the honour to forward a letter received from the Superintendent, Government Cinchona plantations, instituting a comparison between the growth of Cinchona plants in British Sikkim and on the Nilgiris.

ENCLOSURE No. 1.

From the Superintendent, Government Cinchona Plantations, to the Commissioner of the Nilgiris, dated Ootacamund, 23rd October 1871, No. 94.

With reference to the measurements of the Cinchona plants taken by us at Neddivuttum on the 27th ultimo, in accordance with G. O. of the 26th May 1871, No. 933, I have the honour to submit a comparison of the growth of Cinchona plants in British Sikkim and on the Nilgiris.

2. The following Tables, on the plan adopted in my letter of 25th April last, give the result of four years' growth.

CINCHONA SUCCIRUBRA.	NEDDIVUTTUM.											
	PLANTED APRIL TO JUNE 1867. MEASURED SEPTEMBER 1871.											
	Ten largest consecutive trees.						Ten smallest consecutive trees.					
	Yearly growth.		Yearly growth.		Yearly growth.		Yearly growth.		Yearly growth.		Yearly growth.	
No.	Height.	Circum- ference one foot from the ground.	Height.	Circum- ference one foot from the ground.	Height.	Circum- ference one foot from the ground.	Height.	Circum- ference one foot from the ground.	Height.	Circum- ference one foot from the ground.	Height.	Circum- ference one foot from the ground.
1	14	10 1/4	3	8 1/2	11	5	10 1/4	2 1/2	11	6	7	7 1/2
2	15	9	3	11 1/2	10	4	9 1/2	10	15	...	7 1/2	7 1/2
3	14	9	3	8 1/2	10	10	12	3	13	2	8 1/2	8 1/2
4	14	...	3	13 1/2	9	10 1/2	10 1/2	2 1/2	16	4	10 1/2	10 1/2
5	12	5	3	1 1/2	9	10 1/2	10 1/2	2 1/2	11	16	4 1/2	4 1/2
6	15	11 1/2	3	11 1/2	11	5	11	2 1/2	12	7	7 1/2	7 1/2
7	14	9	3	8 1/2	11	...	8	2	17	4	11 1/2	11 1/2
8	14	11	3	8 1/2	11	9	12	3	15	9	11 1/2	11 1/2
9	15	7	3	10 1/2	11	9	14 1/2	2	16	9	9 1/2	9 1/2
10	13	4	3	4	11	4	13 1/2	2	15	8	12 1/2	12 1/2
Average	14	7 1/4	3	8	11	0 1/2	11 1/2	2	14	6 1/2	9	9
Average of both finest and worst grown trees ...												
			12	10			12 1/2	3				2 1/2

DARJEELING.

PLANTED FEBRUARY AND MARCH 1867. MEASURED FEBRUARY 1871.

CINCHONA
SUCCIRUBRA.

Proceedings of the Madras Government, Revenue Department, 12th January 1872.

3. The above results show that on the Nilgiris four years' growth of *Cinchona Succirubra* exceeds that of the same species in British Sikkim by 3 feet 10 inches in height and 7 inches in circumference of stem, or three times the bark-producing surface. When the greater thickness of bark of the Nilgiri plants is taken into consideration, the yield may be estimated at about four times the quantity of bark produced during the same period of growth by plants of this species in Sikkim.

4. Our largest red bark tree, planted in July 1864, measured 28 feet 5 inches in height and 24 1/2 inches in circumference at one foot above the ground. The largest tree, planted in October 1865, measured 24 feet 4 inches in height and 18 1/2 inches in circumference. These plants were the finest that could be found, and were considerably above the average. The largest tree found in the Sikkim plantations, planted in 1864, measured 24 feet in height and 17 1/4 inches in circumference.

5. The following are the measurements of ten consecutive plants of *Cinchona Calisaya* at Neldivuttum and Rungbee :—

CINCHONA CALISAYA.		NEDDIVUTTUM.						DARJEELING.					
		PLANTED OCTOBER, NOVEMBER, AND DECEMBER 1867. MEASURED SEPTEMBER 1871.						PLANTED JUNE 1867. MEASURED FEBRUARY 1871.					
		Ten largest consecutive plants.						Ten largest consecutive plants.					
No.	Height.		Circum- ference one foot from the ground.	Average yearly growth.			Height.	Circum- ference one foot above ground.	Average yearly growth.				
				Height.	Circum- ference.				Height.	Circum- ference.			
	Feet.	Inches.	Inches.	Feet.	Inches.	Inches.	Feet.	Inches.	Inches.	Feet.	Inches.	Inches.	
1	9	1	7½	2	3¼	1½	15	...	9	3	9	2½	
2	8	9	7½	2	2¼	1½	12	4	8½	3	1	2½	
3	12	3	9	3	5	2½	14	3	9½	3	6½	2½	
4	8	6	9½	2	1½	2½	13	3½	7	3	3½	1½	
5	8	2	6½	2	½	1½	12	7½	6½	3	1½	1½	
6	9	2	9	2	3½	2½	14	9	10½	3	8½	2½	
7	7	10	6½	1	11½	1½	15	6	7	3	10½	1½	
8	8	6	10	2	1½	2½	14	...	6½	3	6	1½	
9	11	7	10½	2	10¾	2½	14	8½	7½	3	8½	1½	
10	9	9½	8½	2	5¾	2½	15	...	7½	3	9	1½	
Average...	9	4½	8½	2	4½	2½	14	1½	7½	3	6½	2	

Giving an annual average growth of 1 foot 2 1/2 inches less than the growth of this species on the Sikkim plantations, but the circumference of stem is in favour of the Nilgiri plants; the bark-producing surface of the main stem of the plants being nearly one-half more than those on the Nilgiris. When the additional thickness of bark is taken into account, the produce of *Cinchona Calisaya* on the Nilgiris will be about equal to that of the Bengal plantations.

6. Of all the species of *Cinchona* cultivated on the Nilgiris, *Cinchona Calisaya* has made the most unsatisfactory growth, and consequently has not been cultivated to so great an extent as the *Cinchona Officinalis* which grows freely, and yields a superior bark for the manufacture of quinine.

*Proceedings of the Madras Government, Revenue Department,
12th January 1872.*

No. 159.

ORDER THEREON, 12th January 1872, No. 80.

Miscellaneous.

ORDERED that copy of this report be
furnished to the Government of Bengal in
continuation of letter dated 3rd October
1871, No. 1,730, and that copy be also transmitted to the Secretary of State, with
copy of Proceedings dated 26th May 1871, No. 933.

(True Extract.)

(Signed)

W. HUDLESTON,

Secretary to Government.

To the Commissioner of the Nilgiris.

Ed. F. R. Bantleman.

Commissioner's Office
Dacca 27 Oct 1870

No 83

From

J. W. Brooks Esqre
Commissioner of
Nailgheries

To

The Secretary to Government
Revenue Department.
Dacca

Sir,

With reference to Government
Order 26th May 1871 No. 933, I have the
honor to forward a letter received from
the Superintendent Government Cinchona
Plantations instituting a comparison
between growth of Cinchona plants in
British Sikkim and on the Nailgheries.

I have the honor to be

Sir

Yours most obedt. Servant

J. W. Brooks
Commissioner

7-9-70

Referred to by Mr. L. J. 1872

Govt. of 1872

REVENUE.

To

THE COMMISSIONER OF THE

NAILGIRIS.

Dated January 12th.

Recd.

Encl.

G. O., 12th January 1872, No. 80.

JANUARY.

Nos. 158-159.

Cinchona grown in British Sikkim and on
the Nailgheries.—Letter from the Superintendent,
Government Cinchona plantations, instituting a
comparison between them, ordered to be forwarded
to the Government of Bengal and Secretary of
State.

Government Gardens

Ootacamund 23rd October 1871

No 94

From,

W. G. McIvor Esq^r

Supt. Govt. Cinchona Plantations

To,

J. W. Brooks Esq^r

Commissioner of the Nilgheries

Ootacamund

Sir,

With reference to the measurements of the Cinchona Plants taken by us, at Reddinattum on the 27th Ultimo, in accordance with G.O. of the 26th May 1871 No 933. I have the honor to submit a comparison of the growth of Cinchona plants in British Sikkim and on the Nilgheries.

The following tables, on the plan adopted, in my letter of 25th April last, gives the result of 4 years growth.

Cinchona

G.O. 26 May 1871 No 933

Revenue Dept

No. 83

1871

No 3432

Date

27 Oct 71

No 2875

Commissioner's Office,

To,

Ootacamund.

The Secretary to Government

Revenue Department

Ootacamund.

S.O. No. 80-12 from 1872

Enclosures.

One

SUBJECT.

Submitting a letter from the Dept. Govt. Sikkim, enclosing a comparison between the growth of Cinchona plants in British Sikkim and on the Nilgheries.

12158

No.	10 largest consecutive trees				10 smallest consecutive trees				10 largest consecutive trees				10 smallest consecutive trees			
	Height		Early growth		Height		Early growth		Height		Early growth		Height		Early growth	
	feet	inches	feet	inches	feet	inches	feet	inches	feet	inches	feet	inches	feet	inches	feet	inches
1	14	10 1/2	8 5/8	5 5/8	11	5	10 1/4	2 1/2	11	6	9	1 3/4	5	10	2 1/2	1 5/8
2	15	9	15 3/4	5 1/4	10	4	9 3/4	2	15	15	7 1/4	1 3/8	4	4	3 5/8	2
3	14	9	14 3/4	3 3/4	10	10	12	8 1/2	13	2	8 1/4	2	6	1 1/2	10 1/2	2 3/8
4	14	10 1/2	13 1/2	6	10	9	10 1/4	8 3/4	16	4	10 1/2	1	3	6	10 1/2	3 3/8
5	12	5	11 1/2	1 1/2	9	10 3/4	10 1/2	5 7/8	11	16	4 1/2	1 3/8	2	2	9 1/2	2 1/2
6	15	11 1/2	11 1/2	11 1/2	11	5	11	10 1/4	12	7	7 3/4	2	4	3	10 1/2	2 3/8
7	14	9	14 1/2	8 1/2	11	11	8	9	17	4	11 1/2	4	1	11	6 3/4	2 3/8
8	14	11	13 1/2	8 3/4	11	9	12	11 1/2	15	9	11 1/2	3	3	1	9 1/4	2 3/8
9	15	7	14 1/2	10 1/4	11	9	14 3/4	11 1/4	16	9	9 1/4	4	2	7	7 3/4	2 3/8
10	13	4	12	4	11	4	13 1/2	10	15	8	12 1/2	3	2	4	7 1/2	2 3/8
Average	14	7 1/2	13 3/4	8	11	5 1/2	11 1/4	9 1/8	14	6 1/4	9	7 1/4	3	5	10 1/2	2 3/8
Average of both first and second years trees																

The above results show that in the
 Nilgherries 4 years growth of *Chinchona succirubra*
 exceeds that of the same species in British Sikkim
 by 3 feet 10 inches in height and 7 inches in
 circumference of stem or three times the bark
 producing surface. When the greater thickness
 of bark of the Nilgherry plants is taken into
 consideration, the yield may be estimated at
 about 4 times the quantity of bark produced
 during the same period of growth by plants
 of this species in Sikkim.

Our largest Red Bark tree planted in
 July 1864, measured 28 feet 5 inches in height, and
 24 1/2 inches in circumference at one foot above the
 ground. The largest tree planted in October
 1865, measured 24 feet 4 inches in height, and
 18 1/2 inches in circumference. Three plants were
 the finest that could be found, and were consider-
 ably above the average. The largest tree found
 in the Sikkim Plantations, planted in 1864,
 measured 24 feet in height and 17 1/2 inches in
 circumference.

The following are the measurements
 of 10 consecutive plants of *Chinchona baliaya*
 at

at Reddinattum and Runghee.

No.	Reddinattum						Darjeeling					
	Planted Oct. Nov. & Dec. 1867, March & Sept. 1871						Planted June 1867, March & Feb. 1871					
	10 largest consecutive plants						10 largest consecutive plants					
	Height		Circumference 1 foot from the ground		Average yearly growth		Height		Circumference 1 foot above ground		Average yearly growth	
	feet	inches	feet	inches	feet	inches	feet	inches	feet	inches	feet	inches
1	9	1	7 $\frac{1}{2}$	2	3 $\frac{1}{4}$	1 $\frac{1}{2}$	15		9	3	9	2 $\frac{1}{4}$
2	8	9	7 $\frac{1}{4}$	2	2 $\frac{1}{4}$	1 $\frac{1}{8}$	12	4	8 $\frac{3}{4}$	3	1	2 $\frac{1}{4}$
3	12	3	9	3	3 $\frac{1}{4}$	2 $\frac{1}{4}$	14	3	9 $\frac{1}{2}$	3	6 $\frac{3}{4}$	2 $\frac{1}{8}$
4	8	6	9 $\frac{3}{4}$	2	1 $\frac{1}{2}$	2 $\frac{7}{8}$	13	3 $\frac{1}{4}$	7	3	3 $\frac{3}{4}$	1 $\frac{1}{4}$
5	8	2	6 $\frac{1}{2}$	2	1 $\frac{1}{2}$	1 $\frac{5}{8}$	12	7 $\frac{1}{2}$	6 $\frac{3}{8}$	3	1 $\frac{1}{8}$	1 $\frac{5}{8}$
6	9	2	9	2	3 $\frac{1}{2}$	2 $\frac{1}{4}$	14	9	10 $\frac{1}{4}$	3	8 $\frac{1}{4}$	2 $\frac{5}{8}$
7	7	10	6 $\frac{3}{4}$	1	11 $\frac{1}{2}$	1 $\frac{1}{10}$	15	6	7	3	10 $\frac{1}{2}$	1 $\frac{3}{4}$
8	8	6	10	2	1 $\frac{1}{2}$	2 $\frac{1}{2}$	14		6 $\frac{1}{4}$	3	6	1 $\frac{1}{2}$
9	11	7	10 $\frac{1}{4}$	2	10 $\frac{3}{4}$	2 $\frac{7}{8}$	14	8 $\frac{3}{4}$	7 $\frac{1}{4}$	3	8 $\frac{1}{4}$	1 $\frac{3}{4}$
10	9	7 $\frac{1}{2}$	8 $\frac{1}{2}$	3	5 $\frac{1}{8}$	2 $\frac{1}{5}$	15		7 $\frac{1}{2}$	3	7	1 $\frac{7}{10}$
Average	9	4 $\frac{1}{2}$	8 $\frac{1}{2}$	2	4 $\frac{1}{8}$	2 $\frac{1}{8}$	14	13 $\frac{1}{4}$	7 $\frac{7}{8}$	3	6 $\frac{1}{2}$	2

giving an annual average growth of 1 foot 2 $\frac{3}{8}$ inches less than the growth of this species on the Nilgiri Plantations, but the circumference of stem is in favor of the Nilgiri plants. The bark producing surface of the main stem of the plants being nearly one half more than those on the Nilgiris. When the additional thickness of bark is taken into account, the produce of *Chinchona calisaya* on the Nilgiris will be about equal to that of the Bengal Plantations.

Of all the species of *Chinchona* cultivated on the Nilgiris, *Chinchona calisaya* has made the most unsatisfactory growth, and consequently has

not been cultivated to so great an extent as the *Chinchona officinalis* which grows freely and yields a superior bark for the manufacture of quinine.

I have the honor to be
Sir,

Your most obedient servant

J. S. M. L.

Supt. Govt. *Chinchona* Plantations

Revenue Dept.

No 80

Chen

Pro. of the Madras Government
Under date the 12 January 1872

Read the following
letter from the Commissioner
of the Nilgiris—

Submitting a letter from
the Supd. Govt. Chinchona Planta-
tion instituting a comparison
between the growth of Chinchona
plants in British India and
on the Nilgiris—

H.E. 24. Oct. 1871, No 83.

Ordered that copy of
this report be furnished
to the Govt. of Bengal in
continuation of letter dated
3rd Oct. 1871 No 1730. and
that copy be also transmit-
ted to the Secretary of State
with copy of Proceedings dated
28th May 1871, No 933—

L.R.

12 January 1872

3. To the Commissioner, Nilgiris. Desd. 13 Jan'y/72.

List

2/3/72
From, the Superintendent
Govt. Chinchona Plant
Nilgiris.

Dated 23rd October 1871
Recd 35-
No. 3432/71
No 94

Chinchona Plants
submit a comparison of
the growth of — in British
India and on the Nilgiris.

158-159

G. O.
Comparison of the growth of
Cinchona plants in British
Tehran and the Algeres

Des