M.R.O. 1—77,003—8-6-31.

(1) Number of pages 1

(2) Date of repair

(3) Initials of the Referencer

MADRAS RECORD OFFICE.

Government of Madras.

Revenue DEPARTMENT.

G.O. No.	830	Press Mis.
Dated	1-6-1878.	

Not to be folded or roughly handled

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

1st June 1878, No. 830.

Read the following papers:—

No. 9. Despatch from the Most Honorable the Secretary of State for India.

Revenue, No. 2.

INDIA OFFICE, LONDON, 17th January 1878.

MY LORD DUKE,—I have received your Grace's letter, No. 72, of the 29th October last, forwarding the report of the Commissioner of Nilgiris on the Government Cinchona Plantations for the official year 1875-76.

2. This report is generally satisfactory so far as the progress of the plants and the harvest of bark is concerned. The number of plants in permanent plantation is not given with any precision, but I observe that of the different species grown by far the greater number consist of "Cinchona officinalis" and "Cinchona succirubra," the latter being the most important for cultivation, as it yields Cinchonidine in remarkably large quantities, and flourishes at a lower elevation and over a wider area than other kinds, whilst the former is better adapted for the growth of bark for commercial purposes.

3. It is much to be regretted that Mr. McIvor left no records relative to hybridisation and upon the mossing system, regarding which it is stated he possessed much valuable information. This of itself seems to offer a strong argument in favor of appointing some competent member of the Forest Department as Superintendent of the Nilgiri Plantations, and probably one may be found possessed of sufficient practical knowledge to enable him to investigate anew those questions which the late Superintendent had been engaged upon, but regarding which the information he had collected has been lost in consequence of his untimely death.

4. In a recent despatch I have addressed the Government of India on the subject of the sale of these plantations; but it would appear from the remarks contained in paragraph 11 of the report under review that private owners of Cinchona Plantations have not yet sufficient experience to enable them successfully to propagate plants from seed, upon which, of course, hybridisation entirely depends. Should it, therefore, be considered that the time has not yet come when the Government plantations may with safety be disposed of, and the future cultivation of Cinchona in India be left entirely to private enterprise, it will be a matter for the careful consideration of your Government whether the appointment of a successor to the late Mr. McIvor should not be at once made.

5. Another subject to which I desire to direct your Grace's consideration is that of the appointment of a Quinologist in the place of Mr. Broughton, and the resumption of the manufacture of Cinchona alkaloids in the Nilgiris. Your predecessor's letter, No. 6, of the 9th March 1875, reported the resignation of his appointment by Mr. Broughton, and it was then stated that your Government would shortly address me regarding the appointment of a Government Quinologist in his place. No communication has, however, since reached me on the subject.

6. Instead of manufacturing a cheap febrifuge in India, it has been the practice in recent years to send the Cinchona bark home for sale in the London market. This was, no doubt, an advisable course to pursue at one time, as it afforded some criterion of the relative value of the different kinds of bark beyond what could be obtained by chemical analysis; but to continue this practice merely

for commercial purposes and so compete with the established trade is to go altogether beyond the purpose for which the Government plantations were established, or ought to be maintained.

7. Pecuniary advantage has not been the main object with which Her Majesty's Government have promoted the cultivation of the Cinchona in India. They have sought chiefly to ascertain the lowest cost at which the remedial agent could be procured without detriment to its efficiency and the chemical form by which that end could be best secured.

8. With reference to the manufacture of the alkaloids, I observe that the establishment of a manufactory at the Nilgiri Cinchona Plantations was decided on in 1866, and I then selected Mr. Broughton on the recommendation of Dr. Frankland, who reported highly of his scientific attainments, to conduct the operations. It was understood from the first that if the bark were all sent to England for sale a larger direct profit might possibly be secured than if it were converted into the alkaloids in India. But commercial profit was not the chief object in view, and the prices that could be obtained for the bark in the London market were not, therefore, the most important element in the investigation Mr. Broughton was instructed to undertake. This simply was the necessary cost of cultivation and manufacture, and the lowest price at which the febrifuge could be produced locally where the bark was grown.

9. Mr. Broughton's report, dated 1st December 1873, shows the progress that had been made in the manufacture to that date; while the facts supplied by Surgeon-General Balfour in his letter, dated 28th April 1874, appear fully to establish the value and efficacy of the so-called "amorphous quinine" which had been manufactured since 1870. The reports also on the therapeutic value of the Cinchona alkaloid manufactured at Sikkim are highly favorable to its use as a febrifuge.

10. I consequently request that your Grace will reconsider the propriety of again undertaking the manufacture of the alkaloids, either on the system followed by Mr. Broughton, or on any other, and also whether it be not still desirable to have at your disposal a chemist able to watch the progress of the Cinchona Plantations in respect to the production of the alkaloids in the bark under varying conditions of age, &c. I shall also be glad to know whether sufficient knowledge has been acquired upon this subject to justify the abolition of the office held by Mr. Broughton.

11. As the questions that are referred to in this despatch are of considerable importance generally, I request that they may receive your consideration, and that your conclusions may be reported to me at an early date.

I have, &c.,
(Signed) SALISBURY.

To His Excellency the Most Noble
The Governor in Council, Fort St. George.

No. 10. From G. H. M. BATTEN, Esq., Officiating Secretary to the Government of India, Department of Revenue, Agriculture, and Commerce, (Agriculture and Horticulture,) to the Secretary to the Government of Madras, dated Calcutta, 7th March 1878, No. 82.

I AM directed to convey the following observations of the Government of India in connection with the remarks made by the Secretary of State in paragraphs 5 to 11 of his despatch of the 17th January last, No. 2 (Revenue), reviewing the Report on the Nilgiri Cinchona Plantations for the year 1875-76.

2. As remarked by the Secretary of State the main object which the Government had in view in the establishment of Cinchona Plantations in India was to afford the people of the country a cheap febrifuge. The Government of Madras

have, however, hitherto conducted their plantations on purely commercial principles, the bark produced having been shipped for sale in the London market; and the plantations have in consequence been able to show, year after year, a flourishing balance sheet. The stock of quinine in the world has thus been increased, and the price of the article generally reduced; but no special benefit has been conferred on the people of India, quinine at its present market price (which is believed to exceed Rs. 20 an ounce) being quite beyond their means. In Bengal, on the other hand, an efficient and very cheap febrifuge has been prepared by Mr. Wood, the Government Quinologist, and is sold to the public at Rs. 20 per *pound*, or about one-sixteenth of the cost of quinine at the present time.

3. The Secretary of State has now requested the Government of Madras to "reconsider the propriety of again undertaking the manufacture of Cinchona alkaloids either on the system followed by Mr. Broughton or on any other," and has suggested the advisability of appointing a successor to Mr. Broughton as Quinologist. With reference to this suggestion I am to request that His Grace the Governor in Council may be invited to consider whether it would not be feasible to have the Nilgiri *Succirubra* bark converted into Cinchona febrifuge in Bengal under the supervision of Mr. Wood, whose process is, it is understood, more economical than that followed by Mr. Broughton in the preparation of his "amorphous alkaloid," while its success has been fully demonstrated; and also whether it would not be advisable for Mr. Wood to manufacture quinine itself from the Nilgiri Crown (or *Officinalis*) bark, which is understood to be very rich in that alkaloid. Should His Grace in Council desire it the Government of India will be prepared to request the Government of Bengal to depute Dr. King, the Superintendent of the Botanical Gardens at Calcutta, who is in charge of the Cinchona operations at Rungbee, to visit Madras and the Nilgiris, and to lay before the Madras Government any explanation they may wish to receive on points of detail with reference to the foregoing suggestion. Dr. King would also be instructed, if the Madras Government think fit, to visit the Cinchona Plantations at Ootacamund and Neddivuttum, and to submit to that Government any suggestions with reference to them that may occur to him.

4. I am to request that, before the present despatch of the Secretary of State is replied to by the Government of Madras, the Governor-General in Council may be favored with an expression of opinion of His Grace the Governor in Council on the above suggestion. If His Grace in Council should concur in it the necessary communication will be made to the Government of Bengal.

No. 11. ORDER THEREON, 1st June 1878, No. 830.

Miscellaneous.

THE questions raised by the Secretary of State are the retention of the Cinchona Plantations, the appointment of a successor to Mr. McIvor, the re-employment of a Quinologist, and the resumption of the local manufacture of a febrifuge.

2. The Government have already intimated to the Government of India that they are entirely averse to the relinquishment of the plantations, that they consider the retention in Government hands essential to the development of the Cinchona cultivation, and that there are many facts connected with the cultivation of Cinchonas in this country which have yet to be ascertained, examined, or tested by experiment. This can only be done satisfactorily on the Government Plantations under systematic direction. Private enterprise, although growing, is not yet sufficiently established to encourage Government to withdraw from the cultivation of a plant of such vital importance to the people, and whose treatment is yet experimental.

To Government of India, 14th March 1878, No. 400.

The Government are not aiming at an high pecuniary profit, but at the extended acclimatisation of the plant, and the discovery of the cheapest means of utilising it for the good of the population, although in accordance with the views of the Home Government as expressed in the Secretary of State's despatch, dated 4th April 1871, the sale of bark in England is being continued "until the outlay attendant upon the introduction and establishment of the cultivation of the plants is repaid."

3. The importance of possessing more accurate data on which to estimate the value of the Cinchona Estates has long been felt, and the Commissioner was last* year directed to take measures to ascertain approximately the number and age of the trees and have corrected surveys prepared. Subsequently, Captain C. Walker, Deputy Conservator of Forests, was, on his return from special duty in New Zealand, deputed to conduct the desired enumeration and submit accurate and detailed information regarding the plantations.

*G.O., 10th July 1877, No. 2,273, paragraph 14.

G.O., 15th January 1878, No. 72.

The report of this officer is expected very shortly, and the Government will then be in a position to decide as to the future managing staff and control of the plantations.

4. The question of the possibility of locally manufacturing a drug that shall be commercially and chemically an economical production, while of such medicinal value as to justify its cost or the investigation of other modes of utilising the bark for the use of the population at a reasonable cost, is also one that requires for its investigation special and technical knowledge.

5. His Grace the Governor in Council resolves, therefore, to appoint a Committee to investigate and report on this subject which necessarily also embraces the question of the reappointment of a local Quinologist.

The officers noted in the margin will form members of the Committee with the Acting Commissioner of the Nilgiris as President.

Surgeon-Major W. R. Cornish, F.R.C.S.
Surgeon-Major G. Bidie, M.B.
Mr. Lorne A. Campbell.

6. It is desirable that the Committee should meet at as early a date as possible.

7. Captain C. Walker's report will, when ready, be communicated to the Committee, and all papers in the Government Office relating to Cinchona will be held at their disposal.

8. In connection with the subject of the local manufacture of a febrifuge, the Committee will doubtless think it desirable to confer with Dr. King. They will communicate their wishes on the subject.

(True Extract.)

(Signed) C. G. MASTER,
Secretary to Government.

To the Acting Commissioner of the Nilgiris.
„ Surgeon-Major W. R. Cornish, F.R.C.S.
„ Surgeon-Major G. Bidie, M.B.
„ Lorne A. Campbell, Esq.
„ the Accountant-General.
„ the Board of Revenue.
„ Captain C. Walker.
„ the Conservator of Forests.
„ the Surgeon-General, Indian Medical Department.

Exd. F. R. Bantleman.

9-5-95
7/6/88
21-6-95
28-7-115

Copy

Govt. of [1878] Madras.

REVENUE.

To

THE ACTING COMMISSIONER
OF THE NILGIRIS
&c., &c., &c.

Dated June 1st.

Recd. Encl.

G.O., 1st June 1878, No. 830.

JUNE.
Nos. 9—11.

Cinchona Plantations.—Passing orders on papers relating to certain questions connected with the —, and resolving to appoint a Committee to investigate and report on the subject of the possibility of locally manufacturing a drug.

Page 47 Despatch
1 Rev. Dept. 78

No. 82.

FROM

G. H. M. BATTEN, ESQ.,

Officiating Secretary to the Government of India,

To

THE SECRETARY TO THE GOVERNMENT OF MADRAS.

Department of Revenue, Agriculture, and Commerce.

Agriculture and Horticulture.

Dated Calcutta, the 7th March 1878.

SIR,

I AM directed to convey the following observations of the Government of India in connection with the remarks made by the Secretary of State in paragraphs 5 to 11 of his despatch of the 17th January last, No. 2 (Revenue), reviewing the Report on the Nilgiri Cinchona Plantations for the year 1875-76.

2. As remarked by the Secretary of State, the main object which the Government had in view in the establishment of Cinchona Plantations in India was to afford the people of the country a cheap febrifuge. The Government of Madras have, however, hitherto conducted their plantations on purely commercial principles, the bark produced having been shipped for sale in the London market; and the plantations have in consequence been able to show, year after year, a flourishing balance-sheet. The stock of quinine in the world has thus been increased, and the price of the article generally reduced; but no special benefit has been conferred on the people of India, quinine at its present market price (which is believed to exceed Rs. 20 an ounce) being quite beyond their means. In Bengal, on the other hand, an efficient and very cheap febrifuge has been prepared by Mr. Wood, the Government Quinologist, and is sold to the public at Rs. 20 per *pound*, or about one-sixteenth of the cost of quinine at the present time.

3. The Secretary of State has now requested the Government of Madras to "reconsider the propriety of again undertaking the manufacture of cinchona alkaloids, either on the system followed by Mr. Broughton or on any other," and has suggested the advisability of appointing a successor to Mr. Broughton as Quinologist. With reference to this suggestion, I am to request that His Grace the Governor in Council may be invited to consider whether it would not be feasible to have the Nilgiri *Succirubra* bark converted into cinchona febrifuge in Bengal under the supervision of Mr. Wood, whose process is, it is understood, more economical than that followed by Mr. Broughton in the preparation of his "amorphous alkaloid," while its success has been fully demonstrated;

and also whether it would not be advisable for Mr. Wood to manufacture quinine itself from the Nilgiri Crown (or *Officinalis*) bark, which is understood to be very rich in that alkaloid. Should His Grace in Council desire it, the Government of India will be prepared to request the Government of Bengal to depute Dr. King, the Superintendent of the Botanical Gardens at Calcutta, who is in charge of the cinchona operations at Rungbee, to visit Madras and the Nilgiris, and to lay before the Madras Government any explanation they may wish to receive on points of detail with reference to the foregoing suggestion. Dr. King would also be instructed, if the Madras Government think fit, to visit the Cinchona Plantations at Ootacamund and Neddiwuttum, and to submit to that Government any suggestions with reference to them that may occur to him.

4. I am to request that, before the present despatch of the Secretary of State is replied to by the Government of Madras, the Governor General in Council may be favoured with an expression of the opinion of His Grace the Governor in Council on the above suggestion. If His Grace in Council should concur in it, the necessary communication will be made to the Government of Bengal.

I have the honour to be,

SIR,

Your most obedient Servant,

Officiating Secretary to the Government of India.

Revenue Dept
No 1162.

1878.

GOVERNMENT OF INDIA.

DEPARTMENT OF REVENUE, AGRICULTURE, AND COMMERCE.

AGRICULTURE and HORTICULTURE.

To

THE GOVERNMENT OF MADRAS.

SW No. 890-1 June 1878

No. 82.

Dated Calcutta, the 7th March 1878.

Rec'd 15 —

SUBJECT.

ENQUIRES whether, in the event of its being decided to recommence the manufacture in India of cinchona bark into alkaloid, the Government of Madras would wish the work to be done for them under the supervision of Mr. Wood, the Quinologist to the Government of Bengal.

For orders

No 10 -
Ag -

27-6-78. R. 1-5-78. R.C. 10-5-78 R.P.
1/3 & R 2d aff 5/8 R.C. 14-5-78

11

India Office,
London, 17th January 1878.

Revenue,
No. 2

To His Excellency The Most Noble The Governor in Council, Fort St. George.

MY LORD DUKE,

Para. 1. I have received your Grace's Letter, No. 72, of the 29th October last, forwarding the report of the Commissioner of Nilgiris on the Government Chinchona Plantations for the official year 1875–76.

2. This report is generally satisfactory, so far as the progress of the plants and the harvest of bark is concerned. The number of plants in permanent plantation is not given with any precision, but I observe that, of the different species grown, by far the greater number consist of "Chinchona officinalis" and "Chinchona succirubra," the latter being the most important for cultivation, as it yields chinchonidine in remarkably large quantities, and flourishes at a lower elevation and over a wider area than other kinds, whilst the former is better adapted for the growth of bark for commercial purposes.

3. It is much to be regretted that Mr. McIvor left no records relative to hybridization, and upon the nossing system, regarding which it is stated, he possessed much valuable information. This of itself seems to offer a strong argument in favour of appointing some competent member of the Forest Department as Superintendent of the Nilgiri Plantations, and probably one may be found possessed of sufficient practical knowledge to enable him to investigate anew those questions which the late Superintendent had been engaged upon, but regarding which the information he had collected has been lost in consequence of his untimely death.

4. In a recent Despatch I have addressed the Government of India on the subject of the sale of these plantations; but it would appear from the remarks contained in paragraph 11 of the report under review, that private owners of Chinchona plantations have not yet sufficient experience to enable them successfully to

propagate plants from seed, upon which, of course, hybridization entirely depends. Should it, therefore, be considered that the time has not yet come when the Government plantations may with safety be disposed of, and the future cultivation of Chinchona in India be left entirely to private enterprise, it will be a matter for the careful consideration of your Government whether the appointment of a successor to the late Mr. McIvor should not be at once made.

5. Another subject to which I desire to direct your Grace's consideration is that of the appointment of a Quinologist in the place of Mr. Broughton, and the resumption of the manufacture of Chinchona alkaloids in the Nilgiris. Your predecessor's letter, No. 6, of the 9th March 1875, reported the resignation of his appointment by Mr. Broughton, and it was then stated that your Government would shortly address me regarding the appointment of a Government Quinologist in his place. No communication has, however, since reached me on the subject.

6. Instead of manufacturing a cheap febrifuge in India, it has been the practice in recent years to send the Chinchona bark home for sale in the London market. This was, no doubt, an advisable course to pursue at one time, as it afforded some criterion of the relative value of the different kinds of bark beyond what could be obtained by chemical analysis; but to continue this practice merely for commercial purposes, and so compete with the established trade is to go altogether beyond the purpose for which the Government plantations were established, or ought to be maintained.

7. Pecuniary advantage has not been the main object with which Her Majesty's Government have promoted the cultivation of the Chinchona in India. They have sought chiefly to ascertain the lowest cost at which the remedial agent could be procured without detriment to its efficiency, and the chemical form by which that end could be best secured.

8. With reference to the manufacture of the alkaloids, I observe that the establishment of a manufactory at the Nilgiri Chinchona Plantations was decided on in 1866, and I then selected Mr. Broughton on the recommendation of Dr. Frankland, who reported highly of his scientific attainments, to conduct the operations. It was understood from the first, that if the bark were all sent to England for sale a larger direct profit might possibly be secured than if it were converted into the alkaloids in India. But commercial profit was not the chief object in view, and the prices that could be obtained for the bark in the London market were not, therefore, the most important element in the investigation Mr. Broughton was instructed to undertake. This simply was the necessary cost of cultivation and manufacture, and the lowest price

at which the febrifuge could be produced locally where the bark was grown.

9. Mr. Broughton's report, dated 1st December 1873, shows the progress that had been made in the manufacture to that date; while the facts supplied by Surgeon-General Balfour, in his letter dated 28th April 1874, appear fully to establish the value and efficacy of the so-called "amorphous quinine" which had been manufactured since 1870. The reports also on the therapeutic value of the Chinchona alkaloid manufactured at Sikkim are highly favourable to its use as a febrifuge.

10. I consequently request that your Grace will reconsider the propriety of again undertaking the manufacture of the alkaloids, either on the system followed by Mr Broughton, or on any other, and also whether it be not still desirable to have at your disposal a chemist able to watch the progress of the Chinchona plantations in respect to the production of the alkaloids in the bark under varying conditions of age, &c. I shall also be glad to know whether sufficient knowledge has been acquired upon this subject to justify the abolition of the office held by Mr. Broughton.

11. As the questions that are referred to in this despatch are of considerable importance generally, I request that they may receive your consideration, and that your conclusions may be reported to me at an early date.

I have the honour to be,
My Lord Duke,
Your Grace's most obedient humble Servant

No 141

Revenue

17th Jan.y 187

The
Secretary to Govt. St. Geo.
No. 2

Rec.d 9 Feb.y 1878.

Acknowledging rece.
of Despatch dated 29 Oct.r 18
72, forwarding report of Commi
of Nilgiris on the Govt. Chinch
Plantations for 1875/76 & requ
that certain questions pertai
may be considered & the deci
sions of the Madras Govt.
reported at an early date

No 1162

I should say let-our question be closed at this time - let Capt Walker close his investigation undisturbed - & we shall then know exactly what the Statutes & Plantations Consist of -

The next question is this satisfactory for the public good -

i.e. by sale of Plantations - by sale of Trees -

& manufacture of
Lucicine or other
preparation - &c

The first would
destroy opportunities
for hydrocinalum
with a view of getting
the plant - there
theoretically medicinal -
& supplies of seed
&c - & dispense it
& the said article -

The 2nd course

sanctioned by Sir C.
Wood - for certain purposes
& expenses of Troops
Depôts - does not
directly benefit the
people of India because
its effect on the price
of Lucicine is
insignificant -

The 3rd course meaning
and I think that
Dr Cornish - Medical
& Surgeon General -
might well be appointed

to report on the
question of whether
or not the chalcedonic
limestone known
as Wood Johnson
or ~~the Sand~~ Sandy
can profitably be used
to produce cement at such
a cheap rate as to
make them worth
manufacturing —
if so, then
should it become
profitable to manufacture
a cement —

or if any preparation of
the pyrites could be
done profitably on a commercial scale with
its ash —

In this point — Also is
to report in Harvey Kaplan
Walker — it is
prospectual question
on which the doctors can
give the best information
and they can give
it here as well as at
Ohio —

Having Walker report
as to the two and the
Judicial opinion as
to the use of the
manufacture of

Preparations. The
Govt wish be able to
reply to Mr Gov't Sec
Sec of State —
If the Doctors are
opposed a Committee
Dem. Doc may have
their report — as soon
as we get Walker

Mr 30/3

I received fully in
H.G. despatch & aff.
Dr Lomax & Dicey
& the Language.
a Com. & considers
respects as fully
the Campaign
question.

I do not see any
necessity for Walker
to come for this purpose.
From me they will be
sent back by him to
Kimberley & the
Cabinet. They may require
& that be possible.

W.V. 2.4.)8

R.C. 14-5-78
C. 27-4-78. R. 1-5-78. R.C. 10-5-78. Rpd

No 1162/78

Rolle

A change
takes place on the
Hills and fresh
enquiries in the
matter of Cuchna
succeeds to the
quasi-Commission
on this important
matter.

So far as my
Experience of Commissioners
has gone - It has not
reached back to the
late Mr Brooks - but
I should

Should on the whole have been better in Other professional hands - But of them when the report is before us - In the meantime we know enough to make it clear that we shall have "somewhat to do" in clearing our Administration of the past if it turn out that we had been living in a fool's paradise as regards a very

large percentage of our trees. The matter of their health too is an important enquiry and should be thoroughly looked into at this time.

The Secretary of State seems likewise to contemplate a recurrence to our crude & costly factory-System and Bengal is already blowing the trumpet of victory where we have failed - and I believe that

that looked at
from the same
truthful point of
view – the Superintendent
of genuine point of
view – from which
we look at things,
we may find that
the sound is very
uncertain probably
a great deal above
the ring of simple
truth.

It seems true
then that we want
all the acquaintance
with the subject we
can command and
I

I should suggest
that both Doctors
Cornish & Bidie,
who have already
been engaged on
enquiry into Cinchona
matters should be
placed in Communi-
-cation with Captain
Campbell Walker
and the Govt. Commissioner
with reference to this
enquiry. It would
I believe save time
in the long run.

I submit this
note for the

Consideration of
my Honble: Colleagues.

18/3 NA

31

Since I wrote
my Note on the 16th March
the Govt: of India's
letter of 7th March has
been circulated and
I requested the Revenue
Secretary to return
to me the papers for
further Consideration
and my views is greatly
strengthened - our
Cinchona matters
are on their trial - with
some awkward confessions
before us - and we
must
not

Consideration of
my Honble: Colleagues.

must in self defence
mass up all our
available strength
under to combat
and dessipate once
for all crude notions
and discomfort —
Emperis who are
simply not telling
the truth.

Cheap febrifuges
and non Commercial
principles are the
purest hysterics in
world - and the sale
of Woods "own" in —
Bengal at 20 Rs per
tin is philanthropic

1. 26
33

which Eventuate in
in desastrous decrease
of the Stock of Quinine
or other febrifuge in
the world.

Mr Wood has been
airing himself before
the Pharmaceutical
in London and
has had a rough time
of it & Dr Cornish
has just shown me
a masterly demolition
of the individual and
Exposure of the Bengal
Govt which will
perhaps surprise
the Secretary of State
when he sees it —

Rot

Nothing is Mr. Wood's success not demonstrated but it proves on his own showing that he gets but 1 to 2 to per cent of Alkaloid out of bark which contains some 5 or 6 per cent. (a far less quantity than Broughton Extracts) and that the Bengal Govt. sacrificed from £30,000 to £40,000 £ of material to get Mr. Wood's £6,000 of cheap (inactive) febrifuge with the whole value of

of the good quinine which the difference would have purchased. It is demonstrated beyond question that Mr. Wood is Rs. 20 not the value of a lb of this Stuff but that the whole calculation is radically & woefully fallacious, but that in all probability Bengal system will certainly that land that Govt. in the death of the horse without having had the advantage of the golden egg. The

The existence and Continuance of the Plantations is on the best and the manner of harvesting it's Consequences and the whole question of manufacture; and I am satisfied that in all respects we must have the strongest & most Experienced professional Committee we can get together to report on this occasion — And I would constitute it before we reply to the Government of India

v

despatch - That done we may require both Wood & Knight to be there - not to instruct us or as Commissioners on our work but as witnesses that cross Examination may serve to dissipate the fogs which their Ignorance has created.

I earnestly recommend that Dr Bidie and Dr Cornish be added to our Commission & directed to proceed to the Hills to join Capt. C. Walker &

I would attach

...ers order. Mr Iver to be appointed

Mr Lorne Campbell
to the Commission as
a Secretary for a few
weeks. His acquaintance
with the records will
be invaluable to the
Govt: in disposing
of the matter.

I doubt not if
this force & Mr Huddleston
would like to see Dr
Cornish's note - which
I have perused - he
would communicate
them.

25/3 [illegible]

R.C.14-5-78
C-27-4-78. R.1-5-78. R.C.14-5-78 Rec'd

No 14/7 539

[illegible]
20 Mch 78

I have already named
recommended the con-
stitution of a Com^n on
the Canadian question &
proper that letter & then
if this is not done -
of the referred & Dr Cornish -

No doubt by the Colo
Sec and Mr Hemming
articles. That will be
part of the matter to
occupy us a right direction
on this important matter

12/24 [illegible]

[illegible] requires order. Mc Iver to be appointed.

Re print for Parl. Papers.

Some alterations are
1. the retention of the plants
by Govt. & the appt. pro-
tempore & Govt. Botanist
— or the contrary.
2. if retained — the
resumption of the
Factory & the appointm.
tempore & Govt.
Botanist.

In regard to the first
point I am decidedly of
opinion that the time has
not yet arrived for Govt.
to part with the plants
there is much yet
matter for experiment
both as to cultivation

Observe that in calculating
the cost of the Govt. transportation
in Jany. the Com. deducted the cost
of the Bullocks — from the Sandra
Basket price but charges for
carriage &c. — but in the latest
quotes the Sikkim factory.
the cost is apparently drawn
from that publication.

Re disp. — great.		
Sikkim. Big Basket Bark.	2	feet 6.
— Branch —	"	6. —
Sikkim — all round under		6. —

This materially affects comparison grounds.

and Correction. H/K
I think that the question
of keeping a Dept. of the
Work enterprise will
be considered at an
early date.

In regard to second
point my impression
is that the whole of
the Processes are
very greatly enhanced
in cost over the Europ.
Manufacture — if at
all. & that in view
of keeping this article
in the Market. the system

regards order.

Mr Iver to be appointed

of cheapening the raw material in the Home market by increased supply is the most promising method. His visit has set them thinking apparently. Prices for Bark seem as high as ever. when higher.

Either a cheaper & easier manufacture may be advantageously presented seems to be [illegible] question. The Bark powder &c. for tan lately laid introduced on a thinly Extensive scale is the first simple form of preparation which has been brought use. It is [illegible] Result. Mr Broughton

R.C. 10-5-78 Ref. R.C. 11-5-78
C. 17-4-78. OP 22-4-78 R.C. 27-4-78
R.J. 5-5-78.

Revenue Committee Mr Skinner
Legard enquiries
Have any Indian
Bark [illegible]
re the
27th April

Thanks Secretary
[illegible]

No 14/7543

REVENUE DEPARTMENT.

No. 2

From Secretary of State for India

Dated 17 January 1878.

FOR ORDERS.

Some months before his death Mr Mc Ivor had submitted a very full paper on the Moxa system — See at. Aug. 76 — It was circulated to the Members of both Governments

[illegible] requires order.

[illegible] Mc Ivor to be appointed

For Orders.

Secretary of State's Despatch 17 January 1878 No 2. On report of the Cinchona plantations for 75-76

Letter from the Govt of India 17 March 1878 No 82, regarding the above

The above papers have already been circulated and noted on but separately.

The questions raised in connection with them may be summarized as follows:—

I. Are the Cinchona plantations to be retained at present?

II. Is a successor to Mr Iver to be appointed.

Settled unanimously in the affirmative.

Requires order.

FOR ORDERS.

With our material we cannot manufacture a chest. If any of the material or the workmanship be bad we cannot waste 2 Rs on useless work. If we are to have Sulphate of Q. let us have Sulphate of Q. Nothing is under par especially Red Bark. Let us have Mr Cross's letter & Dr Cross & report & then we will see.

His Grace &c

R.C. 27-4-78. R. 1-5-78. R.C 10-5-78 RA
R.C. 11/4/78 & R 12/4/78 } C. 17-4-78
R.C. 25/3/78 & R 10 & 11/4/78 } R 29-4-78
C. 16-Feb/78 R 25/3/78 } R.C. 12-5-78

III. Is there in India a resident chemist to make experimental analyses of the different barks?

Requires order.

IV. Is the manufacture of a febrifuge to be again undertaken locally

This point it is agreed to refer to a commission but it remains to settle V & VI

V. The composition of the Commission (whether of medical men as such or of mixed members) to investigate the above question.

Nos. II, III, & IV can only be determined on the Report of the Commission - and to that consideration they should be referred.

VI. The scope of the Commission's enquiry.

D.G. to Capt Walker's report, his suggestions & opinions & all the questions still unsettled to be discussed by it or is it simply to report on the therapeutic value and cost of Broughton's quinine, Wood's Cinchona febrifuge, or other preparation - (see Note below)

VII Is Dr King of Calcutta to be asked to come here and give information or inspect?

VIII Is Mr Wood to have

Requires orders.

I think that a mixed commission as suggested is apparently accepted by Mr Huddleston is indispensable - It cannot be too strongly stated that competent persons to examine the matter in all its bearings - should have a clear & definite understanding as to the accounts of these states & the actual outlay in raising & working these plantations up to this time (interest included) - & question the accuracy of the accounts before us & many others do the same - & practically the whole question turns on this: at what cost can ~~cinchona bark~~ good cinchona bark per lb be obtained at cost? - Without this preliminary fact, Doctors cannot advise us on the points we need advice on

A mixed Commission is I believe indispensable

have Madras grown bark to turn into febrifuge and crown bark to make quinine out of.

Note

1. The latest report as to the medicinal value of Broughton's amorphous quinine is that published in G.O. 9th March 1875. No 388. It is dated 28th April 1874. The manufacture was continued, it is believed, until the middle of 1875, & there will probably now be available additional evidence as to.

to the efficacy of the preparation, but as there was in 1874, a record of no fewer than 1882 cases of fever treated by it there can be little doubt that the favorable opinion then recorded would now be endorsed from the result of further experience.

2. Woods "Cinchona Febrifuge," had in the opinion of those who tried it in this Presidency, certain drawbacks. viz - insolubility and nauseating effects -

Since

& Lt King & Wood old be exam^d - Otherwise the discussion will be never ending - a mere Doctor's report - as a febrifuge will be simply treated as non existent & the old ground will have to be gone over again & again -

Our manufacture was abandoned - a cost of the waste of material & Bengal experience - the waste of 50% of alkaloid - but confirms our action -

29/4 WH

Mr Nias acct. I think Natl Govt not put Dr Smith on the Commission he would be acquainted But I have no objection to offer

Since these results were reported, the Medical Department, have been unable to obtain a fresh supply and can therefore furnish no additional testimony regarding it.

3. Unfortunately Mr. Wood has made a personal matter of the unfavorable report of the Madras Medical officers on his Febrifuge. Attention is requested to the accompanying extract of a speech of his (at a meeting of the Pharmaceutical Society) attacking Dr Smith as representative of Madras.

4. The rate at which any

any fabrifuge is produc-
-ble depend(1) on the
value to be fixed on the
bark from which it is
made and(2) on the ac-
tual expense of the proces
of manufacture. +(3) on the power of extracting all the alkaloid (such pro-
-cesses as we can apply

5 With reference to
the first point Govern-
ment have to settle
whether the manufactory
is to be debited with
the market value or
the prime cost of the
bark. The former is
at present very high
(though last months'
sales show a fall) but
when prices were much
lower Mr Broughton
stated that "if the
"present prices obtained

Note. In 77 Crown bark realized 15-8 downwards. In 78. the highest price for this bark has hitherto been 11-10. but 5 bales of Yellow bark (C Calisaya) fetched 12-7-

We have to ascertain the prime cost — on the basis of accurate Capital & Rev: Acct for the whole industry up to now

Our Peruvian Manufacturers can afford to pay because they can extract all the alkaloid of which the bark is possessed — The whole alkaloid of which be lost 33% & Bengal loses 50%

"obtained by the sale of
"bark in England be
"debited to the alkaloid
"manufactory for its raw
"material it is quite
"clear that a cheap febri-
"fuge will be impossible."

6 At the same time
if merely the prime cost
of the bark is charged it
will not necessarily follow
that the product is really
cheap, for it may
have used up an unne-
cessary quantity of bark.
This has been the case
hitherto with all these
febrifuges! There has been
an altogether unnecessary
waste of alkaloids in
their

their production.

7. On the 2nd point Messrs Broughton and Wood have furnished full information, as far as their preparations are concerned, but in any case the expense will vary with the amount of bark worked in each year. To keep the cost of production low a large quantity of bark would have to be worked up regularly year by year but until the number and age of the trees in the plantations is known and the method of harvesting to be adopted is settled it is impossible to say whether a sufficient supply can be relied on. For reliable information on these matters Capt.n Walker's report will apparently have to be awaited.

I have no objection, as Mr Cross desires it, to have Capt. Walker & com. elete his own translation of his own report

Others need not retard the Appt of the Commission.

8. It is to be noted that Messrs Cornish and Bidie are almost the only officers of Government who have any personal knowledge of the plantations in the past, and that the present Commissioner, through whom Captain Walker's report is to be submitted, being quite new to the subject, can render Government no

no assistance in considering it.

Capt. Walker is to wait on his report & to take instructions before it is sent in.

I shall be glad to receive it very shortly. I should like to have your opinion upon the Comm.rs letter before sending the Comm.rs as it may raise questions for consideration affecting its composition.

As further regards Capt. W.s report I think the Comm.rs opinion that there is no special advantage in placing Capt. W. on the Comm.n but rather the reverse, it is the W.R. that it should be of a mixed character. A thorough complete & public enquiry

The Secy. has probably written to you on it. Mr. Wood has placed himself in direct communication with Mr. Palmer for that object.

Dr. Christison has also communicated to Mr. Palmer his opinion as to the best mode of conducting the experiments.

I send the Memo. of questions for the Comm.rs with a view to the Commissioners

1 pharmaceutically
2 commercially

of the local manufactures of the Bark & I am requested by the Comm.rs to give

& the expediency of prosecuting the experiment

The product may be valuable as a medicine - the latter Mr. Palmer & Dr. Christison specially qualified to advise on.

& I think it desirable that Mr. Palmer should be specially questioned & advised on this.

Material is practically inactive by the extraction of the alkaloids present in the Bark & the fuel & plant -

The best mode of estimating the value of the Bark in calculating the cost of the product is another point requiring determination

The Comm.rs should collect & bring evidence available bearing on the question of manufacture

Should the consideration of the point arise whether the price of the Bark should be a premium - I do not think that Govt. should specially qualified to advise on this.

The three branches of the subject are

Cultivation or Production
Harvesting
Manufacture:

Capt. W. Scott's report should be read in the first branch & the second, as regards past experience & Native results. & his advice for the future.

The Comm.rs will do the same for the third.

J.P.B.
20. 4. 58

I send you

Cornish
acknowledging
the hospital
Campbell
Bidie

& I do like another personal - question is a new one - the medicine

For Orders

Regarding the Cinchona Plantations

Value of the Cost of Introduction

Issued on the Calcutta Sales

on the Calcutta Sales

a Stores non Investment

Element

Rs 1/5

R.C. 14-5-78
C. 27-4-78. R. 1-5-78. R.C. 10-5-78 Rep.

Revenue Department

27
59

Proceedings of the Madras Government
Under date the

Read the following:-

Secretary of States Despatch
17th January 1878 No. 2, on
report on the Cinchona
Plantations for 1875-76-
Letter from Govt of India
Dated 7th March 1878 No 82,
regarding the above-

Rs as all
27/5

S.K.
28/5

W.B.
5/5

The questions raised
by the Secretary of State
are the retention of the
Cinchona plantations,
the appointment of a
successor to Mr McIver,
the

the preemployment of a
quinologist and the
resumption of the local
manufacture of a febrifuge.

2. The Government
have already intimated
to the Govt. of India that
they are averse to the
relinquishment of the
plantations [at all events
at present] and they
[see no reason to recon-
sider their opinion] there
are many facts [and
theories] connected with
the cultivation of Cinchonas
in this country which
have yet to be ascertained
~~examined~~ or tested by experiment
and this can only be
done satisfactorily
on the Govt plantations - under systematic direction
~~which~~ private enterprise although growing
~~has direction~~ is [early] sufficient established to encourage
Govt to withdraw from [the undertaking]
and entrust the people

to Govt. of India 14th March
78 No 400

consider the attention
Govt have given to the
development of the
Cinchona cultivation
and

The Govt are not aware of
any such Government proposal
extended as to include
the plant - and the
of the cheapest
Quinine is [in the]
vide Secy of State despatch (Rev.)
4th April 71 in Jo.
8th June 71 No 1011.
(See also Jo
No population

Jo. 10th July 77 No: 2273.
(para 14)

corrected

The cultivation of a plant of such

2nd

[It is also] in accordance
with the views of the Home
Government [that] the sale
of bark [should] be continued
"until the outlay attend-
ant upon the introduction
and cultivation of the
plants is repaid."

3. The importance of
procuring accurate data
on which to estimate
the value of the Cinchona
Estates has long been felt,
and the Commissioner
was last year directed
to take measures to
ascertain approximately
the number and age
of the trees, and have
plans prepared. [The
matter having subse-
quently been noticed by

61

by the Secretary of State the scope of the investigation [has been enlarged] and Capt^n C. Walker Deputy Conservator of Forests was deputed to conduct it and submit accurate and detailed information regarding the plantations.

The report of this officer is expected very shortly and it will then become necessary for Govt to decide on the other questions referred to by the Secretary of State.

4. In considering the future management and utilization of the Estates it is desirable that Govt should be in possession of the advice of those who have had some previous knowledge of the plantations or have had practical experience of cultivation on these hills. The question of the possibility of locally manufacturing a drug commercially & chemically that shall be an economical production is also one that requires for its investigation special & technical knowledge.

5. His Excellency the Governor in Council resolves therefore to appoint a Committee to investigate and report on the whole subject

L.O. 15th Jany 78 No 72

[On his return from Special duty in New Zealand]

The Govt will be in a position to decide as to the future managing staff required for the plantations

subject which more partly also embraces the general

The appointment of Dr Cornish and Bidie
Lt Col. Beddome. ?

Dr Cornish Colonial Beddome
Capt. Walker
Babtow

Note
Dr Cornish & Colonial Beddome are now here - Dr Bidie proposes to take leave very shortly but perhaps the Govt would not object to his coming to the Hills now at their expense as he may wish to go elsewhere when on leave.
Do

Attend Bidie in this Coming & the Hills on his leave.

the officers noted in the margin will form members of the Committee with the Ag Commissioner of the Nilgris as president and Mr Barlow will request Mr Rohde and Captn Cox, if now in the country, to favor Government by taking part in the enquiry.]

6. It is desirable that the Committee should meet as early date [to admit of their visiting the Nedeliantum and Pykara plantations before the commencement of the S.W. monsoons, and as

** Note
These gentlemen are two practical planters of good repute and their opinion as to the cultivation, appearance, and value of the Estates would be very valuable.
Mr Rohde is not here - Capt Cox is, it is said shortly expected but some other non-official might be substituted if he is likely to be delayed.
Do

I see no value in these gentlemen as an enquiry into a matter only 2 Special Technical Knowledge

Be -

I would put with Committee
+ Bidie + good Layman
L. Campbell Per instance

Note
It is submitted that in this way the Under Secretary will be more useful than if a member of the Committee as he has at present only a paper knowledge of the subject but with the Committee he can acquire a practical acquaintance with it that may be turned to account when their report reaches Govt.
Do

Do make him Secretary to the Committee

Yes if not the most useful a member
Mr Campbell
Member & Sec Mr or Mr Ambrose - Comm & Bidie

as it is believed that all the officers named are or will very shortly be, on the Hills, the Acting Commissioner will arrange for an early meeting.]

7. Captain C. Walker's report will, when ready, be communicated to the Committee, and all papers in the Government office relating to Cinchona will be held at their disposal [by the Under Secretary to Govt in the Revenue Deptt who will render any assistance in his power.]

8. In connection with the subject of local manufacture of a febrifuge, the Committee will [also give early attention to the

the suggestion of the Govt. of India in the foregoing letter relative to Mr. Wood, and will state whether they would wish to confer with ~~or examine~~ Dr. King.

Note
The Govt. of India have to be answered on these points

& decide to confer with Dr King on the subject

Bt

Protocol.

The communication with Messrs Rumbold & Co. respecting a Loan on financial matters connected with the concern.

Loan from Messrs. Rumbold & Co.

G.O. and
Appointment of a
Committee to investigate
the question of the
Secy. of State as to the
Cinchona Plantations

Letter dated
transmitting
Council.

This came to me in
a cover with Mr Peters
with a single name
Cinc. Expenses
a/c

C.14-5-78

Revenue Department

No 830

Proceedings of the Madras Government
Under date the 1st June 1878

Read the following:-
Secretary of State's Despatch
17th January 1878 No 2, on
report on the Cinchona
Plantations for 1875-76.
Letter from Govt of India
dated 7th March 1878 No 82,
regarding the above.

The questions raised
by the Secretary of State
are the retention of the
Cinchona Plantations,
the appointment of a
successor to Mr Brebner,
the

the reemployment of a
geologist and the
resumption of the local
manufacture of a
febrifuge.

2. The Government
have already intimated
to the Govt. of India that
they are entirely averse
to the relinquishment
of the plantations, that
they consider the retention
in Govt. hands essential
to the development of
the Cinchona cultivation,
and that there are many
facts connected with
the cultivation of
Cinchonas in this coun-
try which have yet
to be ascertained, examined

or

To Govt of India 14 March 78 No 400

or tested by experiment.
This can only be done
satisfactorily on the
Govt. plantations under
systematic direction.
Private enterprise altho'
growing is not yet
sufficiently established
to encourage Govt. to
withdraw from the
cultivation of a plant
of such vital importance
to the people & whose
treatment is yet experi-
mental.

The Govt. are not
aiming at an high
pecuniary profit, but at
the extended acclima-
tization of the plant
and the discovery of

the

39
71

the cheapest means of utilising it for the good of the population, altho' in accordance with the views of the Home Govt as expressed in the Secy of State's Despatch of 4th April 1871, the sale of bark in England is being continued "until the outlay attendant upon the introduction and establishment of the cultivation of the plants is repaid."

3. The importance of possessing more accurate data on which to estimate the value of the Cinchona Estates has long been felt, and the

Go. 10 July 79 No. 2293 (para 14)

Go. 15 Jany 78 No. 72

the Commissioner was last year directed to take measures to ascertain approximately the number and age of the trees and have corrected survey prepared, Subsequently Captain C. Walker, Bay Conr of Forests, was on his return from Special duty in New Zealand, deputed to conduct the desired ~~enumeration~~ and submit accurate and detailed information regarding the plantations.

The report of this officer is expected very shortly and when the Govt will

Kew

will be in a position to decide as to the future managing staff and control of the plantations,

4. The question of the possibility of locally manufacturing a drug that shall be commercially and chemically an economical production, while of such medicinal value as to justify its cost or the investigation of other modes of utilising the bark for the use of the population at a reasonable cost, is also one that requires for its investigation special and technical

45
73

technical knowledge.

5. His Grace the Governor in Council resolves therefore to appoint a Committee to investigate and report on this subject which necessarily also embraces the question of the reappointment of a local Quinological

Surgeon-Major W. R. Cornish F.R.C.S.
Surgeon-Major G. Bidie M.B.
Mr Lorne R. Campbell

The officers noted in the margin will form members of the Committee with the Ag Comm.r of the Nilgiris as president

6. It is desirable that the Committee should meet at as early a date as possible.

7. Capt.n C. Walters's report will, when ready, be

ber communicated to
the Committee, and all
papers in the Gov.t Office
relating to Cinchona
will be held at their
disposal.

8. In connection with
the subject of the local
manufacture of a
febrifuge, the Committee
will doubtless think
it desirable to confer
with Dr King. ~~on the~~
~~subject~~. They will
communicate their
views on the sub-
ject.

List from orders
Council 31.5.

7 To Medy Commissioners of the Navy per Jane
1 Surgeon Major W. O. Connell. F. O. 69
1 Surgeon Major P. O'Dodie M. D.
1 Lodwick A. Campbell Esqr
6 Accountant General
14 Board of Ordnance
1 Capt. G. Walker
21 Conservators of Forests
6 Surgeon Genl Medy Dept per Jane

50

Appointment of
a Committee for in-
vesting matters
connected with
Cuckmere —

do